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THE
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New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.

Walling in Chalk Concrete.

Mr. T. G. Davidson, F.S.Arc., in describing the chalk-concrete walling which was done at Whiteleaf under his direction, says he first employed chalk and cement to make emplacements in the line, during the war, at Vermelles, and was told that these works survived the particularly severe winter of 1916-17, without injury from frost. Roughly, the mixture in the line was six of chalk (broken to about walnut size) to one of cement; and for platforms or floors, finely broken chalk in proportion of four to one of cement was spread over the surface less than an inch in thickness. In practice this will stand hard wear and exposure to rain and frost, but the edges are liable to crumble away, and the material is not suitable for steps in the open air.

Having this experience he determined to experiment upon walling in chalk-concrete, not merely for barns and temporary buildings, but for housing.

The most suitable thickness for walling for a house on two floors is 18 inches, and for simplicity of working with the apparatus it is best to maintain this thickness up to the wall-plate. As a wall of this dimension, of which one-seventh part was Portland cement would be too expensive and unnecessarily strong, the inner and outer faces were composed of fine chalk concrete (1 to 6), the cement being hydrated with only as much water as was necessary for the purpose, to which a solution of silicate of sodium (water glass) was added. These outer and inner faces of the wall bonded vertically and horizontally to the interior of the wall automatically in the process of the work, averaged three inches in thickness. The twelve-inch cavity was filled with larger chalk undamped and without cement, lime, or other admixture. This filling was done immediately after the cement chalk concrete was in position and was then rammed downwards and outwards with a square and wedge-pointed iron rammer, and was thus pressed into and bonded with the outer concrete. *g*

Chalk possesses a low setting value of its own, and treated as described, the interior of the wall became a solid and compact mass, giving great strength to the wall.

The work was done between shields placed on either side of the wall, and the pressure gave an even and smooth surface to the walling. The admixture of silicate of sodium caused the concrete to set more rapidly than would otherwise be the case, and waterproofed the wall in a permanent manner, since a chemical change is brought about which can only be dissolved by an acid, which outside great towns is a negligible quantity.

A course of this work is composed of two layers, and is 12 inches high, and two courses can be laid with facility in a day of eight hours.

The shuttering which Mr. Davidson invented for this purpose has since been patented and placed upon the market. It is a very simple apparatus which can be used for any concrete in situ, and does not involve the use of scaffolding. The sides are hinged, and turn up upon withdrawable iron rods which pass along on both sides, and interlock shutter to shutter. The true vertical and horizontal position of these rods is automatically controlled by the end pieces of the shuttering, and the pressure is evenly distributed by the looped iron wires which cross through the wall to be threaded on to the side rods. When the rods are withdrawn the wires are thereby released, remaining in the wall as a reinforcement.

On completion of the works the walls allow of ordinary distemper decoration, and nailing and screwing may be done direct without fixing blocks.

In the case of the house which Mr. Davidson built in Buckinghamshire, the walls were frozen on both the interior and exterior surfaces during sixteen days with an atmospheric temperature as low as 20 degree Fr., without any sign of disintegration. When chalk was immediately available on site the saving in cost was 60 per cent. upon the cost of 9-inch brick walling.

About one-eighth of England is chalk, and another one-eighth area lies immediately on either hand.

Mr. Davidson's house at Whiteleaf was mainly constructed by unskilled labour—viz., walling, tiling, carpentry, &c., and skilled labour was only engaged for drainage, plumbing, and hot water installation. Window frames were made in a local joiner's shop, but all other joinery, including doors and staircase, were made on the works. Of the five unskilled labourers four were ex-service men, who showed great aptitude, and some became very efficient wallers, &c. The fifth man had a knowledge of plain carpentry, tiling and plastering, and acted as foreman. Mr. Davidson's principal difficulty was to explain what was required to be done, to men who were unable to read plans accurately. However, by visiting the works one day per week and remaining on the works for that day, they got along fairly well. It was not desired to imitate an antique cottage, but to employ similar local building materials and labour, and to follow the traditional plan, and in this way a picturesque result was obtained without effort.

The Scientific and Industrial Research Board are shortly publishing an account of this method of walling and the appliances used.

R.A. Ateliers Ball.

A fancy dress ball will be held at the R.I.B.A. Galleries on November 4, 1921, in aid of the funds of the First Atelier and the A. A. Atelier. Dancing 9 p.m. to 5 a.m. Tickets 15s. each, students 10s. 6d. each, may be obtained at 28, Bedford Square, W.C.1.

Proceedings of the Society.

A Special General Meeting of The Society of Architects was held at 28, Bedford Square, W.C. 1, on Thursday, October 13th, 1921, at 8 p.m. The President, having taken the Chair, the minutes of the previous meeting, as published in the Journal, were taken as read, and were confirmed and signed.

The following announcements were made:—Nominations: For Transfers to Fellowship, 4. For Membership, 5.

ADMISSIONS:—

AS A LICENTIATE:—LEWIS, JOSEPH PEARN, 6, St. Stephen's Avenue, Clare Street, Bristol.

AS STUDENTS:—DUKE, REGINALD JOHN, 15, Upper Avenue, Eastbourne; HALL, HAROLD LEOLIN, c/o J. Bruce, Esq., 20, Murray Place, Stirling; PERTWEE, MISS ALICE NORA, Lansdowne, London Road, Chelmsford; WERRY, WILLIAM JOHN, 33, Hubert Road, East Ham, E. 6.

RESIGNATIONS ACCEPTED (Members):—G. A. BIRKENHEAD, of Vancouver; R. CROMIE, of Surbiton; A. G. McDUGALL, of Oban; W. MILLS, of San Francisco; W. PARKINS, of Cape Town.

DEATHS: Sympathetic reference was made to the loss sustained by the Society through the deaths of R. E. BRINKWORTH, Member, of Bath, elected 1909, died September 17th, 1921; J. BUTTERS, Member, of Ludlow, Shropshire, elected 1910, died 1921; and N. J. SANJANA, Member, of Bombay, elected 1883, died September 6th, 1921.

ELECTIONS.—The following candidates, whose nominations had been previously announced and published, were submitted for election under Articles 12 and 17 of the Articles of Association, and were declared to be duly elected:—

FELLOW TRANSFERRED FROM MEMBERSHIP.—COX, GEORGE BERNARD, 109, Colmore Row, Birmingham.

MEMBERS:—CHALLEN, HAROLD BERTRAM, 73, Oakhill Road, Putney, S.W. 13; CHAMBERS, BERESFORD, Bronant, Menai Bridge, Anglesey; COWPER, ROBERT STEPHEN, 117, Vassall Road, S.W. 9; CRAZE, ROMILLY BERNARD, 33, The Drive, Fulham Road, S.W. 6.

ELECTION OF OFFICERS AND COUNCIL 1921-22.

The Chairman opened the sealed envelope and handed the following report to the Secretary who read it to the meeting:—WE, the undersigned Scrutineers, declare that we find the result of the Ballot for the election of Officers and Council for The Society of Architects for the Session commencing November 1st, 1921, to be as follows:—

President:—SIR CHARLES T. RUTHEN, O.B.E., F.R.I.B.A.

Vice-Presidents:—TOWN: GEORGE H. PAINE and THOMAS WALLIS; Country: MAJOR C. F. SKIPPER, Cambridge, and ALFRED J. TAYLOR, Bath.

Hon. Secretary:—L. SYLVESTER SULLIVAN.

Hon. Treasurer:—EDWARD J. PARTRIDGE.

Hon. Librarian:—NOEL D. SHEFFIELD.

Ordinary Members of Council in Order of Voting:—

Elected for three years:—Town (5) Fellows, HENRY TANNER (223), ELLIS MARSLAND (187), J. HERBERT PEARSON (165); Members, F. G. M. CHANCELLOR (170), H. M. ROBERTSON (116). Country (2) Fellow, G. C. VERNON-INKEPEN, Portsmouth (108); Member, JOHN KNIGHT, Manchester (96).

Licentiate Members of Council (2):—

Elected for one year:—Town (1): R. D. COLDHAM (182). Country (1): E. JENKIN, Exeter (154).

NOT ELECTED.

Fellows (London): DAVSON, P. M. (78), KINGWELL, A. E. (62), DALES, S. PHILLIPS (60). Country: COOPER, H. A. (100), PORTSMOUTH, H. C. (56). Members (London): SAYER, HARVEY R. (102), BARE, R. G. (97), OVERY, C. F. (29). Country: DAVIES, F. (66), WILLIAMS, E. J. (65), McBEATH, R. J. (31). Licentiates (London): FITT, W. J. (116). Country: LAWRENCE, E. E. O. (148).

The total number of papers received was 320—50 of which were from Licentiates. Of this total we rejected as invalid, 4—net total, 316. Four papers which arrived too late were not counted.

We declare that the above results are correct.

(Signed) HENRY W. BANNAN, E. J. W. HIDER, WM. HOE,
W. OSWALD WRIGHT, Scrutineers. October 12th, 1921.

It was resolved that the Report be received, adopted and entered on the minutes; and that a hearty vote of thanks be accorded to the Scrutineers.

DISTRIBUTION OF PRIZES. The Secretary submitted the following list of prize winners and intimated that Mr. C. A. Browne and Mr. James F. Hampton were unavoidably prevented from attending and that the award to Mr. R. D. Coldham had only been confirmed that afternoon so that the presentation of his prize would be made later. The other prize winners, Messrs. Bright Fraser, J. H. White and W. A. Funnell were in attendance.

JANUARY QUARTERLY COMPETITION. Architectural Design. "The Forecourt of a Public Building." W. A. Funnell (Croydon), Student. Books value £6 6s.

APRIL QUARTERLY COMPETITION. Thesis. "Modern Methods of Building Construction." C. A. Browne (Birkenhead), Student. Books value £3 3s.

JULY QUARTERLY COMPETITION. Architectural Sketches. R. D. Coldham (Barnet), Licentiate. Prize value £6 6s.

TRAVELLING STUDENTSHIP, 1921. Architectural Design. J. F. Hampton (Paddock Wood), Licentiate. Prize value £15 15s.

VICTORY SCHOLARSHIP, 1921. Bright Fraser, M.S.A. (Wallasey, Cheshire) and J. H. White, A.R.I.B.A. (London). Each £50 and Gold Medal.

The President, Sir Charles T. Ruthen, O.B.E., in a brief address, pointed out the educational advantages to be derived from taking part in these competitions, and expressed the view that the evidence of the work accomplished which was on exhibition was of a very high order and reflected the greatest credit on the successful competitors. He explained that the Victory Scholarship Competition had resulted in a tie between Mr. Bright Fraser and Mr. J. H. White, and that the prize of £100 had been divided and the Gold Medal duplicated. The winner of the Travelling Studentship, Mr. James F. Hampton, had already received the first instalment of his award and the

balance would be forwarded to him, and the other prizes, which consisted of architectural books, would be handed to those present and forwarded to the other candidates. He then presented the medals and cheques to Messrs. Bright Fraser and J. H. White, and book prizes to Mr. W. A. Funnell, and congratulated them very heartily on their success.

The President then invited Mr. Arthur J. Davis, F.R.I.B.A., as one of the Jury of Assessors for the "Victory Scholarship," to criticise the work done by the competitors. Mr. Davis gave an exhaustive and extremely valuable and interesting criticism of the designs submitted in the Preliminary and Final Competitions, pointing out that 44 candidates had taken part in the preliminary round which had been held in London, Liverpool and Glasgow, out of which number 10 competitors had been selected by the Jury to take part in the Final Competition, which had been held in London and Liverpool. He explained the principle underlying the "Victory Scholarship" Competition, which differed essentially from other similar competitions. The 12 hours esquisse was done "en loge" without assistance, but the competitors could, in the Final, invoke the assistance and criticisms of their masters and fellow students, the whole object of the scheme of training being to produce the best architectural result which could only be obtained by collaboration. An essential feature of the competition was that the competitor was disqualified if, in his final design, he materially departed from the general lay-out of his 12 hours esquisse.

Mr. Davis expressed the view that the key-note of the two winning designs was the simplicity of the lay-out, and although each contained faults, both were in his opinion very fine sets of designs and able solutions of an extremely complicated and difficult problem.

As an illustration of the method by which such a problem should be tackled, he drew attention to a diagram which M. Chaurès had just drawn on the black board showing how he himself would have set about the same task, exemplifying how the trained mind would in the first instance discard the details of the programme and concentrate on the main lay-out in conception so that the grouping might be logical. It became then a comparatively simple matter to elaborate the details and work out the solution.

At the conclusion of the criticism, which was closely followed by those present, a very hearty vote of thanks was accorded to Mr. Davis.

The proceedings then terminated.

Garden Cities and Town Planning Association.

A first series of lectures on "Great Cities of the World" at King's College, Strand, W.C. Second lecture, Thursday, November 10, 5.30 p.m., "Amsterdam—Past and Present." Lecturer, Dr. H. P. Berlage (President of the Dutch Society of Architects). Chairman, Sir Walter Townley, K.C.M.C. (late British Minister at the Hague). The lecture will be illustrated by lantern slides. Lecture on Milan on December 8, and on Washington, Brussels, Glasgow and Tokio will be given during 1922. Tickets from the Secretary, Garden Cities and Town Planning Association, 3, Gray's Inn Place, Gray's Inn, London, W.C.1.

Professorship and Public Recognition.

By H. BARTLE COX, A.R.I.B.A.

(Ancien élève atelier Laloux, Paris).

Architects often complain of public indifference, but the remedy lies in their own education. Civic pride exists, but architects do not effectively solicit the co-operation of administrative bodies. In France the profession has more public recognition because of its more logically conceived organisation for the training of architects.

In education as in commerce "*Centralisation*" is irresistible. It has many drawbacks, yet remains the best of all imperfect systems. Regional architecture, with all its petty charms, was merely the happy result of costly transport. It is now doomed to uniformity and improvement. It is playing second fiddle, because the local masters are, unfortunately, at present, not up to the required standard. When a sufficient number of professors are sufficiently well equipped with educational rather than practising qualifications then the localities will again be in the position to develop something worthy of the locality.

French architectural education is more a matter of encouraging personal effort rather than the imposing of individual opinion. The *Ecole des Beaux Arts* is not a teaching institution in the English sense. It is a centralisation of the schools. Its characteristics being co-operation among students, representation for judging, solicitation of the public. For this the results, whether good or bad, are necessarily more national than in any other country. Advocates of British nationalism in architecture could not do better than study the organisation of the *Ecole des Beaux Arts*. If a similar thoroughness is impossible without a Ministry of Fine Arts we can at least inspire from its methods of education. A progressive series of "*Programmes*" (subjects) are proposed by a man who has made a special study, not so much of the subject in question, as of the *object and method* of setting the subject. The different "*Ateliers*" (schools) all send in "*Projets*" (designs) for the same programme, whether elementary or advanced. The projects are publicly exhibited in order of merit after being judged by a large representative jury, and awards made accordingly. The student's place in the "*Concours*" (competition) is a great lesson! This method has its shortcomings and outshines all others! The Guilds are gone, and the pupilage system, the best so long as there was nothing better, bids fair to be discredited as a premium stunt. Parents and the public have reason to support the Colleges and Culture.

At the *Ecole des Beaux Arts* the professor entrusted with the setting of programmes is called the Professor of the "*Theory*" of Architecture. This responsible position is now held by Monsieur Victor A. *Blavette*, Grand Prix de Rome (1879), Architect to the Louvre. He succeeded Julien Guadet, a practising architect of equal reputation, and the much esteemed author of the most excellent: *Eléments et Théorie de l'Architecture* (Cours professé à l'Ecole Nationale et Spéciale des Beaux Arts). An invaluable work of the greatest value to all modern architectural students of no matter what nationality. Undoubtedly the best educational treatise on our subject in any language.

The French have the advantage of a tradition that architectural education is a science in itself not picked up in offices, nor necessarily understood by brilliant students. A well known practising architect may not by temperament be suitable to organise educational courses. It is a branch apart. However, the theory of the "*Ecole*" is to turn out practical men, consequently Universities would benefit by nominating a professor capable of realising the principles he is called upon to

inculcate, and Senates should therefore demand something more than mere teachers liable to lapse into prosy pedagogues.

From serious technical conversations with Monsieur Blavette and Monsieur Jules Godefroy (Member of the Council at the Ecole des Beaux Arts) who are in no way responsible for this message, I gathered the following helpful conclusions with reference to the drawing up of programmes:—

1. IN PRINCIPLE, THEY SHOULD BE MAINLY THEORETICAL.
2. THEY SHOULD AIM AT DEVELOPING ARTISTIC IMAGINATION.
3. THEIR OBJECT IS TO TRAIN ARCHITECTS RATHER THAN CONTRACTORS.

However, architectural education has to be adapted to at least three categories of students: Elementary, Intermediate, Advanced. All must pass through the Elementary stage, a few become advanced, the majority remain Intermediate. Programmes for Elementary students should tend to educate them, irrespective of practice, in the first principles of composition, the use of the orders, in the appreciation of proportion and the rendering of effect. Scientific construction can scarcely yet be expected. Students' imagination should not be hampered by petty considerations of a commonplace nature. The aim in this category is essentially artistic and theoretical.

Advanced students are supposed to have some practical experience, to have worked in offices, to have studied stereotomy and other building sciences, besides having submitted solutions for some of the special programmes dealing exclusively with construction. They are then in a position to tackle in a practical way programmes of a nature calculated to stimulate the higher faculties for big decorative schemes. This class of programme is again more particularly of a theoretical nature, and the student should be left the greatest freedom in the choice of style. Special programmes are set with a direct archæological aim preparing the student for restoration work. Here let it be remarked that the "Ecole" stands for scholarly modern interpretation of traditional principles. That it encourages style or character, but not the imitation of styles. In this way a national modern style is in process of development.

Students in the intermediate class now form the greatest number. The majority, especially since the war, cannot afford the time and money necessary for a complete education leading up to the Grand Prix de Rome, and most prefer practice to perfection, consequently the programmes for this class must be more practical, more scientific, and more adapted to the common place requirements of every day life. The mass of the students have to leave when in the second class (or after having done one or two first class projets) in order to make a position in life. The catering for this class is a necessity, but somewhat upsets the principle of the progressive theory of the Ecole training leading up to the "Diploma," yet it is every day gaining more and more ground. However, the important point still remains that the professor responsible for setting the programmes should know how to word them so as to bring out artistic interpretations of practical problems.

THE WHOLE QUESTION OF ARCHITECTURAL EDUCATION LIES IN THE DRAWING UP OF
PROGRAMMES.

The Professor is himself expected to have a clear idea of the solution of the subject proposed; he should be sure of the possibility of the imagined scheme. While leaving great liberty to the student he should suggest the artistic character of the construction, and hint at the required accommodation of the problem avoiding ridiculous dimensions.

In judging the results submitted care is taken to award according to the aim of the programme. If the project is a "*Rendu*" (careful drawing) it must be effectively rendered. If a "*Projet de Construction*" it must be scientifically worked out, but if the problem is one of setting down, rapidly-executed imaginative ideas for a large composition the projects submitted will not be judged from a prosy practical point of view.

We English pride ourselves on being practical, but that rather smacks of laziness or the love of 5 per cent. before fine architecture. The practical fellow has been termed: "A man with one eye and a bag of tools." Napoleon said: "It is *imagination* which rules the human race."

In architecture, as in military tactics, we can profitably inspire from our friends across the Channel. In this connection it is instructive to read Monsieur Godefroy's article in the "*Bulletin de la Société des Architectes Diplômés par le Gouvernement*" for May 1st, 1921, a translation of the main part of which runs as follows:—

"A HAPPY INITIATIVE."

"On visiting the Ecole des Beaux Arts, April 6th, one might have thought it had changed into an Ecole militaire. The officers there, who for the most part ranked as colonels, came to visit the exhibition of the "projects" of the First Class (Advanced) students, and more particularly that of the "*esquisses-esquisse* (rough draft schemes), the subject of which was, indeed, well set to attract them, seeing that it was a question of "*esquisses*" (sketches) for a projet for an Ecole Normale d'Education physique.

The Minister for War hastened, as soon as cognisant with the subject set, to ask the director of the Ecole to inform him of the projects placed first. The sub-director, M. Bomier, then suggested that it would be still better if the Directeur de l'Instruction physique du Ministère, and the officers who might be interested in the matter, would visit the exhibition of the "projects," at which a delegation of the members of the jury would be present to acquaint them with the conditions under which the competition had taken place, and explain to them the ideas which the students aimed at interpreting in their compositions. In this way they would be better able to understand the reasons which brought about the placing in the order of merit.

"What literally astounded all the specialist-officers was to learn that without preliminary lectures, without having known in advance the subject, our young comrades were able to realise such a vast composition in a single day of 12 hours. This is a valuable point for putting into evidence the character of our beloved "Ecole" where our students are trained to develop that intuition of the thing such as it ought to be, so to speak, or if you prefer: that imagination which precedes the real, which every real artist should possess, and which for ever incites him to perfect his work. No other centre of art could develop, to the same point, this particular accomplishment.

"The three '*esquisses*' placed first, were clearly superior. Their authors: Péchin, Marleix and Bergougnoux, emphasised in their composition a decision of choice, a clearness of vision which did not escape the military delegation, so much so that their judgment as techniciens happened to be identical with ours. Lieutenant-colonel Bonvalot, directeur de l'Ecole de Joinville, and Major Oger, from the Military Staff Office, showed their satisfaction by suggesting that a reproduction of each of the esquisses should be sent to the Minister. The next day, General Pénelon, Inspector of the Engineers, in his turn paid a visit to the Ecole des Beaux

Arts. He did not hide the fact that this exhibition was for him a veritable revelation. He even added, which is of great importance, and really marks the beginning of a new spirit well calculated to gladden us, and of which it only depends upon us to get the advantage, that, each time in the future, when it is a question of a building of a military nature an appeal should be made for the ideas of our comrades.

"Thus we have already obtained the result, that our school will no longer be unknown in the future by the military authorities. A veritable close connection might even thus, in time, be established between the War Office and the Ecole. And as the civil authorities would not care to appear behind the times, perhaps we shall see the other Ministries undertake similar relations with us. Indeed, it would not be too much to invite them to do so, as M. Bomier has just done in connection with the War Office.

"It would suffice to inform the competent Ministry which might be interested in the subject of one of our Competitions, whether the Ministry of Agriculture, Trade, or Public Works.

"This collaboration might prove very fruitful to our teaching of architecture so complex that one can say, without exaggeration, that it touches all the domains of national activity."

From the above we gather several points of technical importance, and a very practical suggestion for the increasing of our prestige in the public eye. Technically, it is an eye-opener for the uninitiated to see what well trained students can do (overnight, so to speak) in the matter of composing a vast scheme, providing the programme is previously well drawn up. In actual practice the drafting of the programme is done by the architect himself after much collaboration with the client. When conditions for a public competition are properly drawn the competitors need not ask many "Questions." This meaning much work for the Assessor it is more than ridiculous to suppose that students are familiar with the exact accommodation desirable for every kind of building, hence the immense responsibility of the Professor of Theory.

What better method could be devised for the training of *Rapidity in Composition*, not enough in itself, but a preliminary acquirement of necessity to the purist, and a very practical accomplishment for the business-like artist. The most useful asset for impressing clients.

The "*Esquisse-Esquisse*," is particularly French in method and generally perplexes foreigners. It is decidedly practical, yet essentially theoretical, and in itself must be regarded only as a form of study. If some brilliant but lazy students tend to rest on their oars content with dazzling the eyes of the layman that is no criterion for not developing this faculty so much esteemed by all serious students as a necessity.

Is this skilful brilliancy wide spread among our British students? If not, suggestions for the developing of this particular facility of expression should not be taken amiss. It would certainly do much to dissipate the superstition, of public indifference.

The great principle of the Ecole training is the "*setting and reading*" of programmes. The most logically organised method in the world. The student learns not to make a station look like an hotel, and the professor learns not to ask for an hotel if he wants a station. Our learned President of the Royal Institute of British Architects, Mr. John W. Simpson, Membre Corr. de l'Institut de France, very clearly pointed this out to students last January when considering

the question of public competitions. It is of all considerations the most important both for *Assessors and Competitors*. . . A "school" frankly academic provides theoretical grounding for the practitioner.

The mere reading of a series of programmes proposed for students at the *Ecole des Beaux Arts* is an education in itself. As an instance, a monument might in appearance be either funereal or triumphal, or both, but to merely ask for a monument to the dead is to leave the student in the dark as to how it will be judged, besides the reading of the programme is of no artistic educational value. The question of drawing up instructive programmes is an artistic science in itself worthy of our deepest consideration, and for this I would suggest for the benefit of British architectural education:—

"A greater 'Centralisation' of our teaching bodies; the nomination of a "Professor of Theory" for the setting of programmes. That the jury for judging projects be representative of all the leading professors concerned."

This extension of our efforts, I believe, would lead to more vigorous and more national results.

The professor, a practising architect who has made a special study of this particular form of instruction, should know in detail the requirements both artistic and scientific of all the subjects proposed, such as the usual stock in trade of commemorative monuments, town halls, theatres, museums, etc., and the general principles of town planning, but, for modern purposes, as even he cannot be expected to be familiar with every kind of building, from slaughter houses to colleges and synagogues to lunatic asylums, it is his concern (more than the students) to find them out before setting the subject. For this he has a civic right to request information from administrative bodies, private companies, corporations, associations, etc. The British authorities, if courteously approached, are no less obliging than the French. Thus drawn up, the "programmes" would be valuable documents to architects and the students "*projets*" valuable suggestions to the public. The authorities, not slow to recognise their own interests, encouragement would follow, and our efforts, less isolated, would become better known and more effectively patronised, public indifference would vanish, and the status of the profession would thereby be enhanced.

Ateliers of Architecture.

The attention which has been given to architectural education in recent years has had one interesting development in the formation in this country of several ateliers of architecture, and so far as the experiment has gone it has met with such success that further encouragement and support may well be extended to it. It was in 1913 that the Society of Architects first introduced the *Beaux Arts* method of training architects when the *Beaux Arts* Committee was set up, the idea being introduced to the Council and strongly advocated by the then President, Mr. Percy B. Tubbs, F.R.I.B.A. At this time, the proposal led to a great deal of opposition because many people feared it was an attempt to introduce French architecture into England, but now it is realised that the idea was to introduce only the method of training which has been the vogue at the *Ecole des Beaux Arts* in Paris for upwards of 250 years, and that the method of training did not mean of necessity the adoption of any of the French methods of expression in architecture.

The war, of course, interfered with the scheme, as in 1914 all the students immediately volunteered to serve their country, otherwise it is probable the movement would have developed more rapidly. Since the war the Beaux Arts Committee has been fortunate enough to secure once again the services of Monsieur J. P. Chaires, and the Atelier has now been able to resume its old activities, while the Architectural Association, the University of London and others have founded their own ateliers, which have been taken under the ægis of the Royal Academy. It may be argued that while there is much to be said for the introduction of these ateliers into our system of architectural education, some better word might have been found to describe them, especially as it is inadequate and somewhat misleading. In our issue for June 3 last, Mr. Howard M. Robertson, M.S.A., S.A.D.G., Principal of the Architectural Association School, gave a very clear description of the aims and functions of the ateliers, in the course of which he said: "The word 'atelier' is perhaps misleading if taken as a *rapprochement* to the French Beaux-Arts ateliers, for the latter are essentially day studios in which is performed all the work required for the very complete architectural course of the Ecole des Beaux Arts. Construction drawings, perspective, mathematical preparation, etc., may all be carried out by the students in the French ateliers, although it is true that the Patron is chiefly concerned with the design subjects alone. But the French atelier actually corresponds much more to one of the English school 'year' studios than to the atelier as we have come to understand it. Where, however, the greatest resemblance should lie is in the vivid spirit of competition which is the life of the French ateliers, and which should be the main-spring of our ateliers here." The atelier is really a studio used by students in the evening to work at design, and where they receive help from the "patron," or qualified teacher. "Schools, in the sense of full-time schools, stand in a definite relationship with the ateliers. For a school student, design and theory have come before any large degree of practical experience. For the atelier student, the reverse is probably the case. So schools and ateliers should not, and do not, compete. Rather the one is the complement of the other." What is aimed at by these ateliers is shown by the prospectus of the First Atelier of Architecture, which sets out the objects of the Beaux Arts Committee. It is the method of teaching architecture that is the important thing, and no attempt is made to teach the French or any other styles, but to develop each student's own bent in the most interesting way possible.

There is no doubt, as Mr. A. J. Davis, F.R.I.B.A., remarked in the course of a recent criticism of the work by the students for the Victory Scholarship of the Society of Architects, that some students who show considerable promise should never be allowed to complete their designs, as they are fundamentally wrong in conception. Under proper guidance, such students would not waste valuable time on working up a scheme which is often obviously wrong in conception. One of the chief difficulties in carrying on this scheme, and the extension of it which may come in the near future, is that the various ateliers cannot be made self-supporting, and it would be necessary for funds to be forthcoming as a subsidy. If in the course of time it is shown that ateliers serve an undoubted need, as they appear to have done so far, this support should be forthcoming, and the movement developed and extended.—*From The Builder.*

The First Atelier of Architecture,

28, Bedford Square, London, W.C. 1.

Founded by the Beaux Arts Committee in 1913. This is constituted at present (1921) as follows:—JOHN W. SIMPSON, F.P.R.I.B.A.; Chairman, THE RT. HON. LORD RIDDELL; Vice-Chairman, THE RT. HON. LORD SAYE AND SELE, F. BILLERY, L. H. BUCKNELL, A.R.I.B.A., A. W. S. CROSS, M.A., F.R.I.B.A., A. J. DAVIS, F.R.I.B.A., E. R. JARRETT, A.R.I.B.A., H. V. LANCHESTER, F.R.I.B.A., R. G. LOVELL, A.R.I.B.A., M.S.A., SIR EDWIN L. LUTYENS, R.A., F.R.I.B.A., E. C. P. MONSON, F.R.I.B.A., P.P.S.A., PROFESSOR A. E. RICHARDSON, F.R.I.B.A., EDWIN J. SADGROVE, F.R.I.B.A., P.P.S.A. E. H. SELBY, F.S.I., L. S. SULLIVAN, F.S.ARC., A.R.I.B.A., PERCY B. TUBBS, F.R.I.B.A., P.P.S.A.

Organisation.—The Atelier is controlled by the Beaux Arts Committee. Admission is regulated and the work directed by the Patron, MONSIEUR J. P. CHAURES (Logiste et Diplômé). It is one of a group of Royal Academy Ateliers in London each retaining its autonomy and carried on under standardised conditions of entry, system of education, fees, and internal regulations.

Subjects are set by the Committee of Royal Academy Atelier Patrons, constituted at present (1921) as follows:—SIR REGINALD BLOMFIELD, R.A., and MR. G. GILBERT SCOTT, A.R.A., representing the Royal Academy Ateliers Council, and MESSRS. ROBERT ATKINSON, F.R.I.B.A., F. BILLERY, J. P. CHAURES, and PROFESSOR A. E. RICHARDSON, F.R.I.B.A., Patrons of their respective Ateliers.

Objects.—The Atelier is a centre of communal activity where the students work in an atmosphere of enthusiasm and good-fellowship, seeking to develop their talents, and to add to and revise the knowledge already gained, inspired by the spirit of their environment in seeking after perfection.

The teaching of the Atelier is based on the principle that the architect must know how to compose before beginning to construct.

It is because the productions of architecture are more costly than those of other arts that it is necessary that those who presently will control the spending of money on public or private buildings should study thoroughly the art of architecture, and be trained to solve skilfully its increasingly complex problems.

To attain this, a knowledge of how to compose is necessary. "To compose" means in brief—being given a well-defined scheme, to find the best arrangement and relation of its parts, having regard to site, harmony, orientation, hygiene, durability, proportion, and economy, the study of these subjects being based on the unchanging principles of reason, logic, and method.

The "how and why" of everything must be the corner-stone of the Atelier system, in order to develop the spirit of analysis, criticism and judgment that will enable the student, when left to himself, to be his own judge and adviser.

His imagination will be stirred by comparison and analysis of several solutions of one subject, and to this end the idea has been adopted of arranging a common scheme of work for a number of Ateliers having differing methods and outlook. The students in the various Ateliers greatly benefit by this plan; they become apt at selecting compositions which best fulfil the requirements of the scheme of work the best idea, or in the phrase of the Atelier, "*le parti*."

The object of the Atelier does not end with teaching students to select the "*parti*." The composition, which the outcome of a great effort of intelligence, must be developed to the extreme limit of the student's powers of thought, science and art. He must put his whole soul into his work, and it is here that the Atelier, as a group of workers with a common ideal, can be of the greatest value to him. The Patron is at hand to encourage and advise, so that the road can be followed to its end and the goal attained.

The object of gathering students into an Atelier is to produce sufficient members of tried ability to allow each one to profit fully by the knowledge of the rest; for the Atelier is not only a common centre where each can borrow advice, principles, warnings, methods and ways of seeing and doing things, it is also a place of mutual education, the more skilful helping those who are less advanced.

Among the latter there may be some who at times have ideas which they might, if left to themselves, put aside too hurriedly or work at fruitlessly, but which they can use if helped with good advice. Junior students are admitted to the Atelier to aid their seniors, and may be called on to ink in a plan, or to study part of a section or elevation. The explanations and advice of the senior for whom they work will teach them valuable lessons, and they will derive great benefit in return for their work, and the stimulus they draw from their emulation of others.

The First Atelier, which produced such good results before the War, and was unfortunately disorganised by it, re-opened in April, 1921. The students who survived the War returned and were joined by newcomers, forming a nucleus that has already proved its worth. The permanent exhibition of the Atelier, comprising some of the chief competition drawings, indicates what can be hoped for from the members, who show a good knowledge of their work, and the will to persevere with it.

Students who seek to improve their knowledge of the true principles of architecture will, by joining the Atelier, gain the greatest possible benefit for all, through the emulation resulting from work done in common.

REGULATIONS.

Membership.—Membership is restricted to architects or students of architecture, and Honorary Membership to other persons interested in the aims and objects of the Atelier. The admission of students is at the discretion of the Patron.

Procedure.—Application for admission must be made on the prescribed form to be obtained from the Patron or the Honorary Secretary. Candidates should bring with them evidence of their ability in architectural design.

Qualifications and Privileges.—Candidates must have attained the required standard of efficiency in the recognised architectural schools or by other approved educational methods. Members are eligible to take the monthly subjects and the twelve-hour sketches, which are set bi-monthly, and they have the advantage of the guidance and advice of the Patron. The twelve-hour sketches are worked at the Royal Academy Ateliers "*en loge*" building at Burlington House, and to final designs at the respective Ateliers.

Students who have not attained this standard may, subject to there being vacancies, be admitted to the elementary course. They are not entitled to the assistance of the Patron or to take part in the competitions or participate in the Awards.

Honorary members have the entrée to the Atelier and to the meetings and discussions, etc.

Fees.—The Annual Subscription is £2 2s. payable on admission. The fee for each monthly subject (including two twelve-hour sketches) is 30s. It is not compulsory to take each monthly subject, and the fees are payable only in respect of those actually commenced. A member who receives a "First Mention" is exempted from payment of the fee for the next monthly subject which he takes.

Honorary members pay an annual subscription of not less than one guinea.

Hours.—The Atelier is open day and night, including Sundays. There is a separate entrance in Bayley Street.

Work.—The subjects are set by the Committee of the Royal Academy Ateliers Patrons and the competition designs are assessed by them and criticised monthly. These subjects are worked under the supervision of the Patron, and are accepted as testimonies of study in the R.I.B.A. and The Society of Architects final examination.

Members are not allowed to do other work in the Atelier without the permission in writing of the Patron and the payment of such fees as may be required.

Visitors Day.—The Patron, M. CHAURES, is in attendance at the Atelier on Tuesday evenings from 8 to 10 p.m. for the purpose of welcoming visitors.

Drawings and Personal Property.—Every reasonable care will be taken of drawings and other documents left in the Atelier, but the Committee will not be responsible for the loss of or damage to these or to any other personal property.

Communications.—All enquiries and communications should be addressed to the Patron or to the Honorary Secretary of The First Atelier of Architecture, at 28, Bedford Square, London, W.C. 1. Telephone: Museum 942. Telegrams: "Crypt, Westcent, London."

CALENDAR 1921—1922.

Subject to Revision.

OCT.	1ST.	TWELVE HOURS SKETCH.	DEC.	6TH.	PATRONS COMMITTEE 4 P.M. CRITICISM FOR ALL ATELIERS 8 P.M.
	2ND.			10TH.	TWELVE HOURS SKETCH.
	8TH.	SKETCH FOR MONTHLY SUBJECT.		11TH.	
	9TH.			19TH.	MONTHLY SUBJECT FINISHES.
	11TH.	PATRONS COMMITTEE 4 P.M. CRITICISM FOR ALL ATELIERS 8 P.M.		20TH.	PATRONS COMMITTEE 4 P.M. CRITICISM FOR ALL ATELIERS 8 P.M.
	15TH.	TWELVE HOURS SKETCH.		31ST.	SKETCH FOR MONTHLY SUBJECT.
	16TH.		JAN.	1ST.	
	25TH.	PATRONS COMMITTEE 4 P.M. CRITICISM FOR ALL ATELIERS 8 P.M.		7TH.	TWELVE HOURS SKETCH.
	29TH.	TWELVE HOURS SKETCH.		8TH.	
	30TH.			10TH.	PATRONS COMMITTEE 4 P.M. CRITICISM FOR ALL ATELIERS 8 P.M.
NOV.	7TH.	MONTHLY SUBJECT FINISHES.		21ST.	TWELVE HOURS SKETCH.
	8TH.	PATRONS COMMITTEE 4 P.M. CRITICISM FOR ALL ATELIERS 8 P.M.		24TH.	PATRONS COMMITTEE 4 P.M. CRITICISM FOR ALL ATELIERS 8 P.M.
	12TH.	SKETCH FOR MONTHLY SUBJECT.		28TH.	TWELVE HOURS SKETCH.
	13TH.			29TH.	
	19TH.	TWELVE HOURS SKETCH.		FEB. 6TH.	MONTHLY SUBJECT FINISHES.
	20TH.			7TH.	PATRONS COMMITTEE 4 P.M. CRITICISM FOR ALL ATELIERS 8 P.M.
	22ND.	PATRONS COMMITTEE 4 P.M. CRITICISM FOR ALL ATELIERS 8 P.M.			
	26TH.	TWELVE HOURS SKETCH.			
	27TH.				

The Victory Scholarship Competition.

SOME NOTES BY MONSIEUR CHAURES.

In their issue for January 28th "The Builder" published the successful designs in the Society of Architects' Victory Scholarship Final Competition, 1921, and in view of the importance of proper guidance in the preparation of designs in such competitions they published on October 21st block plans of some of the designs submitted, including the winning designs, with comments by Monsieur Chaures, the Patron of the First Atelier of Architecture, who has also included a plan showing the logical solution.

Monsieur Chaures, writing to "The Builder," says:—

"The planning of a simple building is relatively easy for a trained student who knows the elements of architectural composition. The following examples point out where the difficulties commence when it is a question of grouping the buildings, and how they might be placed wrongly by students who lack knowledge of the general principles of composition. The programme for the Victory Scholarship was a Royal School of Fine Arts, and comprised the study of the following five elements:—(1) The entrance and the museum court; (2) the general service and lecture rooms; (3) the museum and exhibition rooms; (4) the ateliers; (5) the *loges* building. Leaving out of consideration the details which a student with two years' training should know, let us consider the essentials which are only a question of composition, and see how the competitors have understood the programme.

"The design No. 11 first shows doubtful judgment in thinking it possible to balance the museum with the *loges* building, and in placing the latter near the entrance. Second, admitting for the moment that the general service building is well placed, then it is a pity to mask it with the two buildings just mentioned. Third, the ateliers forming a compact block adjoining the general service building, it would have been infinitely better if they had been placed around, and overlooking, the garden museum, as asked for in the programme.

"The design No. 42 shows the ateliers divided into two portions, with different aspects for each atelier, and giving bad lighting for this very reason. The *loges* building is also divided into two, and the general services are altogether inadequate, and have been practically overlooked.

"The author of No. 8 started with the Caserte Palace in his mind; one can understand his difficulty in finding the proper solution to the programme, and it is not surprising to see the atelier buildings balancing the *loges* building, and taking such an unexpected shape. In this scheme the magnificent courtyard is necessary to be in keeping with the Caserte Palace, but this is so much the worse for the general services, which practically do not exist.

"No. 22, so far as the general arrangements are concerned, is quite a possible solution, if the competitor had paid more regard to the programme, but the scheme asks to be turned the other way on the site, so as to get the ateliers further removed from the principal entrance. A serious defect is that the museum balances the *loges* building, whereas in character and size these buildings have nothing in common.

"The general lay-out of the scheme of No. 50 is defective owing to the lack of architectural composition in the entrance court. The proportion of the various buildings is wrong; the museum building is much too small and the general service altogether inadequate. This scheme might be made possible if the site had been twice the size.

" No. 49 is a very similar arrangement to the last one, but the museum is much too small. The general service is better in proportion, but it is a pity that this general service intercepts the valuable light of some of the atelier buildings. The *loges* building is well placed, and the general effect of the garden would be good, but the view of it is blocked by the general services.

" The lay-out of No. 48 is not bad, but the general service building is rather too far away from the atelier buildings. The big mistake is that the *loges* building is badly placed, and would have been very much better at the end of the site, as in Nos. 49 and 50; in its present position it bears no relation to the general composition.

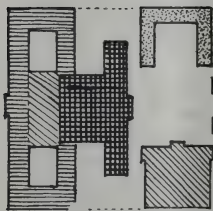
" The logical solution which is reproduced last gives each of the elements in their relative size and importance. Each of the principal elements are grouped on an axis and together produce the greatest sense of spaciousness. The ateliers are placed around, and overlooking, the museum garden, thus enabling the students to study conveniently the architectural fragments not only in the garden, but in the museum itself. This solution shows that it is possible, with proper planning, to have a maximum effect in any style of architecture that may be selected by the students, without incurring any additional expense.

" The developments of the *esquisses* Nos. 49 and 48, the two schemes which divided the first prize, which were reproduced in " The Builder " for January 21st, show how the *esquisse* has been studied, and its final development, after a month's work."

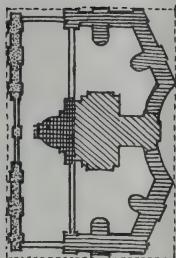
We are indebted to the courtesy of " The Builder " and M. J. P. Chaurès for the use of the blocks illustrating these notes.

The Concrete Institute's New Secretary.

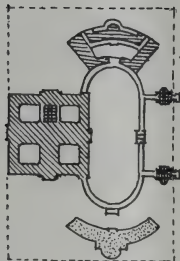
The new secretary of the Concrete Institute, Captain M. G. Kiddy, has been for the past two and a-half years assistant secretary of The Society of Architects. He was educated at Highgate School, and while at school gained prizes in English language and literature, political history, and French. At the age of nine he passed with honours the entrance examination of the Incorporated Society of Musicians. On leaving school Captain Kiddy was for a short time on the London Secretarial Staff of the Buenos Aires and Pacific Railway Co. Joining the Forces in August, 1914, he went to France with the London Rifle Brigade in November of that year, was wounded, and on returning home took up a commission, subsequently serving in Gallipoli, Egypt, and Palestine, and with a naval section of the Royal Air Force. He was gazetted Captain R.F.C. in 1917, and still holds that rank on the reserve list of the R.A.F. After the war Captain Kiddy took up journalism and joined the editorial staff of "The Daily News," being subsequently appointed assistant secretary of The Society of Architects. Captain Kiddy's success is a compliment to the Society, with whom he gained the special experience and qualifications requisite for the more responsible position he now holds. He is the third member of the Society's staff who has been selected to serve other bodies in a similar or higher capacity.



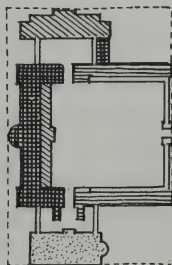
N° 11



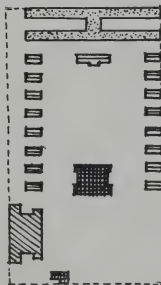
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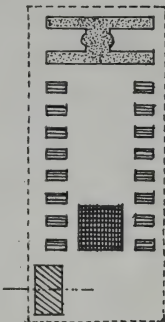
N° 8



N° 22



N° 50



N° 49



N° 48

- LEGEND:
- ① ENTRANCE AND MUSEUM COURT
 - ② GENERAL SERVICES AND LECTURE ROOMS
 - ③ MUSEUM AND COLLECTION ROOMS
 - ④ ATELIER
 - ⑤ LOGES BUILDING

A LOGICAL SOLUTION.



SQUARE SOUTH.



Co-operative Offices for Architects.

By EDWIN H. HEWITT.

ARCHITECTS are not alone in encountering difficulties, sometimes amounting to real hardship, not to mention steadily mounting rents, in securing necessary office space in which to conduct their professional practice. Like physicians and surgeons, however, they have special requirements fundamentally necessary to the proper functioning of their practice. Hence, various interesting and valuable solutions of office arrangement and administrative equipment have been from time to time worked out. While these solutions have ranged all the way from those evolved by the smaller firms, with comparatively modest requirements, to the more important systems of the larger offices, a study of them all indicates the space problem to be a major one. Scarcely any one seems to have answered the question raised by space that is only partially or not at all used during the working hours of the day and yet which is, however, essential to the proper conduct of an architect's practice.

It is generally found necessary to provide a lobby, or reception room, clients' rooms, a room where contractors may figure drawings and obtain instructions from heads of departments, file room for the storing of technical material, as well as space for samples, provision for library, fireproof storage or vault for the safety of original drawings, correspondence and papers, corridors, and closets. In the usual office buildings, the architect finds considerable difficulty in so arranging the space to provide for the above needs that it will be convenient both to his employees and the public, well lighted, securing the necessary privacy for certain parts of the work, and yet providing for the reception of clients. Other professions, especially physicians and surgeons, have found that a duplication, in various offices, of these space requirements and arrangements necessarily places a considerable burden upon the practitioner and hence it is no new thing to find them co-operating to the extent of cutting down duplication without necessarily sacrificing their individuality in practice.

The originators of the particular building programme here described conceived the idea that an association of architects could be formed in conjunction with landscape and city planning experts and a firm engaged in general engineering practice which would not only accomplish the solution of the troublesome problem of space and arrangement, but which might successfully lighten the load in the financing of a building programme. To develop the situation in a concrete way, diagrams were drawn out of the average requirements in square feet of the various offices, particular attention being paid to those portions of each plan involved—reception room, library, clients' consultation, samples, storage space, which might be considered a duplication. When the diagrams were placed side by side, it was apparent at once that a co-operative use of this space would narrow down the space required for the more exclusively executive portions of these firms' requirements, and that if a higher rent be charged for the space used in common, a building could be erected and financed, providing the cost of the building site and its carrying charge in the way of taxes, and so forth, was not too large.

The next step was to make a study of the available building sites, due attention being given to orientation and accessibility on the part of the public. Such a site was soon discovered near enough to the centre of the city to be available to clients and business men, and in line with the general trend of growth of the city. The purchase was made, and Hewitt & Brown designed the building; then was organised the H. B. C. Building Company to finance, build, and manage the property. The plan as worked out, while modest in its proportions, still demonstrates its practicability in daily use.

One of the sources of confusion in an architect's office, especially in restricted spaces, is the coming and going not only of clients, but of material men, contractors and their foremen and others interested in building operations. This, coupled with the usual mechanism of the practice, including draughting and stenographic rooms, creates an impression of confusion which is not conducive to efficient work. Particular care, therefore, was given to the plan of directing the business so that the contractors and foremen could have access to heads of departments, the material men be received in the proper place where their information could be received and compiled, and the comfort of the client being fully considered in his consultation with the architects.

It is a great gain so to dispose the work-rooms that they are immediately accessible and yet not in general evidence to either client or contractor. There is a gain, therefore, all around in convenience in transacting the business of the various offices. The building contains not only architects, engineers and landscape architects, but a well-known firm of interior decorators all separate and autonomous, and yet so grouped as to work separately or together as occasion would require.

In addition to the above, space is provided for several clubs for artists and younger members of the profession who all feel the advantage of a community of interests provided by convenient space in this building.

The building was erected at a cost of \$150,000 by the H. B. C. Building Company, and opened for occupancy the second of November, 1920. It is built on a site having a frontage of 65 ft. on Twelfth Street and 110 ft. on Second Avenue, and is four storeys in height. The first storey is occupied by The John S. Bradstreet Company, interior decorators, and the Skylight Club—the latter so arranged as to connect with the art gallery of the Bradstreet Company. This enables the rooms to be thrown together on occasion when larger space is required and special exhibitions are held.

The second floor contains the executive offices of the Bradstreet Company, the offices of Morell & Nichols, landscape architects and engineers, and the executive office of The Architects' Small House Service Bureau.

The third and fourth stories are especially designed for the private offices, library, sample room, committee and clients' room, blue printing room, contractors' consultation and reference room, stenographers' room, drafting rooms and a large fireproof vault for permanent records, drawings and correspondence. The group of professional men located on these two floors is composed of the following: Hewitt & Brown, architects and engineers; Wm. Channing Whitney, architect; Tyrie & Chapman, architects; and Charles L. Pillsbury Co., engineers. Not the least of the advantages of the plan is the special advantage of proximity and the facility for making the knowledge and experience of each available to the others. This community of interests is most delightful and helpful. In the basement there are provided two dining rooms, one for the use of the Skylight Club, before mentioned, and the other known as the Blue Print Tea Room, for the convenience and pleasure of the occupants of the building and their friends. In addition to this, the dining room is available for use at the meetings of the Minnesota Chapter of the American Institute of Architects, as well as the Post and Lintel Club, composed of the younger architects of the city, and the Attic Club whose members are young artists and illustrators—so that the building is used to capacity, not only during the working hours of the day and the leisure hour, but in the evening.

It required a degree of courage and optimism to put this plan through during this last year of extraordinary difficulties. The builders had their usual number of strikes during the course of operation, financing was difficult, and yet the building company and their friends had faith that they must prepare themselves for the future; and the whole purpose in building is not merely to furnish pleasant quarters and associations,

but its specific purpose is to enable the various firms to practise their professions in the most efficient manner. They feel that by maintaining efficient assistants, the more capable and better trained the better, that they can maintain their organisations to a higher point of efficiency than in their old quarters where space was maintained to carry the peak of the load when the offices were filled with work. It is apparent that with mutual helpfulness in times of strain, work can be produced efficiently and rapidly to the better interests of the profession and their clients.

A word as to the style of building:

This adaptation of the Florentine or Tuscan type of design was chosen because it permitted the use of unusual spacing for the windows. There was no need of symmetry and it permitted the securing of maximum light in the drafting rooms where its need was greatest. The Architects feel that they have accomplished a most desirable thing in providing a uniform distribution of light where most needed.—*The Journal of the American Institute of Architects.*

Notes from the Minutes.

ASSISTANT SECRETARY.—Capt. M. G. Kiddy has resigned the Assistant Secretaryship of the Society, the position he has held for the past two and a half years, on being appointed Secretary of the Concrete Institute, which work he took up on October 1st. The question of the appointment of a successor is under consideration by the Council.

SESSIONAL MEETINGS.—After careful consideration of a report by the Secretary, the Council have decided that in the ordinary way the business meetings of the Society will follow immediately after the Council meetings, at 6 p.m., and that except in special cases the usual practice of a paper to be read will be discontinued.

ANNUAL DINNER.—The Society's Annual Dinner, which has been discontinued since the outbreak of war, is to be resumed, and the preliminary arrangements are in the hands of the Committee. A definite announcement will be made in due course.

FIRST ATELIER OF ARCHITECTURE.—It was announced that Mr. John W. Simpson, P.P.R.I.B.A., had accepted the chairmanship of the Beaux Arts Committee in succession to Lord Saye & Sele, who remains a member of the Committee, and that good progress was being made in the Atelier under the direction of the Patron, M. Chaires. The number of Students was increasing steadily, and the Committee had received a number of donations from supporters of its work.

R.I.B.A. BOARD OF ARCHITECTURAL EDUCATION.—An invitation has been received from the R.I.B.A. Board of Architectural Education inviting the Society to nominate a member whom the Board may recommend to the Council of the R.I.B.A. for appointment as an Advisory Member of the Board. The Council of the Society has accepted the invitation and has nominated Mr. L. Sylvester Sullivan, F.S.Arc.

QUARTERLY COMPETITIONS.—The Council have confirmed the Assessors' award of the prize value £6 6s. 0d. to Mr. R. D. Coldham, Licentiate, for Architectural Sketches submitted in the Quarterly Competition ending July 31st, 1921.

BRITISH EMPIRE EXHIBITION 1923.—It was announced that on the invitation of the Exhibition Council, the President, Sir Charles T. Ruthen had joined the General Committee of the Exhibition of which the Prince of Wales was the President.

TRAVELLING STUDENTSHIP 1921.—The Council has approved of the work done by Mr. James F. Hampton, Licentiate, during a sketching tour in accordance with the conditions of the Competition, and has confirmed the award and authorised the balance of the Studentship to be handed to Mr. Hampton.

Old Beaupré.

By F. W. REES (Member).

To most people Glamorgan is a county of commercial enterprise, but to those who know it, it is a county as beautiful as any in Wales. The commercial interests are found among the "hills" of the north, while the south is a land of broad and flowery pastures, crystal flowing streams, and old villages and castles.

The glorious and picturesque vale of Glamorgan was the settling place of the Normans. The Norman conquest of the south of Wales was exceedingly rapid, and castle after castle rose to mark the victorious advances. The ruins of castles, both large and small, are to be found every few miles, and in most cases they mark the home of some Norman lord.

It is difficult to find any other county throughout Britain that has such a plentiful supply of old castles. Practically all these castles are examples of the grim Mediæval fortress, with its dull grey walls of blank spaces, and they vary little from each other in architectural style. In fact, only one pronounced example can be found, and this is the beautiful Tudor castle of Beaupré.

We follow the beautiful winding valley of the River Thaw until we reach that once famous town of Cowbridge, and when we have gone about two miles beyond it we see on the east bank of the river a heap of ruins perched upon a piece of rising ground. These ruins were once a glorious castle built by the famous Norman Welsh family, the Bassetts. The old Norman castle gave way to an Elizabethian mansion which is now known as Old Beaupré or, as the natives call it, "Old Bewper."

The old mansion is reached by a badly kept farm road. The outer gatehouse which comes into view some distance up the road presents a dull grey stone wall. In it is a typical four-centred arch of the Tudor style, which is ornamented by sunk pilasters of the Ionic Order. These pilasters are deeply fluted and support a moulded cornice. Above this cornice is a group of carvings representing the coat-of-arms of the family, which bears the date 1586. Above the coat-of-arms, in relief, is that fine old motto, now carried by the Welch Regiment, "Gwell angau na Chywilydd" — "Better death than dishonour." Directly over the lower pilasters, are small, curiously moulded and shaped Ionic columns, the lower portion resembling an inverted cone. On top of this cone is a thin neck piece which supports the cap. The whole is a beautiful example of well proportioned work.

On passing through this outer gatehouse we emerge into a square quadrangle, and then straight in front of us we see rising as a mighty giant the real glory of Old Beaupré.

The buildings which once made up the mansion are now a heap of ruins except for a small portion which is still used by the farmer as part of his dwelling house. The porch is in the centre of the chief wall, and was built in 1600. It is in a fair state of preservation and still shows clearly all its ancient glory. It is the best example of Palladian Architecture in Wales, so fine indeed that it has been attributed to the famous Inigo Jones himself. It is, however, earlier than the work of Jones, who did not return from the Continent, where he had been studying, until the latter part of 1606.

It is a typical example of Italian Renaissance architecture. Some say that it was the first piece of work in this style wrought in England. Opinions differ as to the beauty of the Palladian Style, but few will deny that this old arch is a beautiful specimen. It is a curious mixture of Gothic ornamentation and classical Orders, which was a characteristic of Palladio.

The inner porch is a very elaborate and well-proportioned piece of work. It is very tastefully designed and is exquisite in detail. It is built in three storeys; the lower represents the Doric Order, the middle the Ionic Order, the top the Corinthian Order.

The entrance is situated in the centre of the first storey, and has a flat Tudor arch carried on moulded jambs. On either side of the entrance there is a pair of detached Doric columns, which are 6 ft. 4½ ins. in height. The columns are raised upon a pedestal 2 ft. 10 ins. from the ground. The column and its entablature appear to be a combination of the Tuscan and Doric Orders. The moulded base resembles the Roman Doric, while the column has twenty flutes, which correspond with the Grecian Doric. The cap is ornamented with the egg and dart ornament. The column is seven times its diameter in height, and so here it corresponds with the Tuscan. The frieze is neither Grecian nor Roman Doric; it is composed of three members like the Grecian Ionic. The metops are square and are ornamented alternately with the Tudor Rose and an oxen head, which ornament is found largely in Roman work. There are four flutes to each Triglyph. The total height of this storey is 11 ft. 7 ins.

The second storey consists of Ionic columns carried up directly over the columns of the lower storey. The space between them is decorated with a very fine group of carving in relief. It represents the coat-of-arms of six families.

The columns are 5 ft. 2 ins. in height and are carried on a pedestal 1 ft. 10 ins. in height. The columns and the entablature are good examples of the Grecian Ionic Order. There are twenty-four flutes on the column, the cap is enriched with the egg and dart, while the entablature is enriched with the typical Gothic ornament, the ball flower. The column is eight times its diameter in height. In the space between the pedestals of this storey are three panels, on which the following inscription can be still seen:—

SAY COULDST THOU E
VER FYND OR EVER HEA
RE OR SEE, A WORLDLY WRET-
CHE OR COWARD PTOOVE.
A FAYTHFUL FRYNDE
TO BE. RYCHARDE
BASSETT HAVING TO WYF
KATHERINE, DAUGHTER OF
SIR THOMAS JOHNS KNIGHT
BWYLT THIS PORCHE WITH
THE TONNES IN ANO 1600
HIS YERES 65 HIS WYF 55.

The third storey represents the Corinthian Order. The columns are about 4 ft. 8 ins. in height and the pedestal is 2 ft. 6½ ins. There are twenty-four flutes on the columns, while the cap is a typical Corinthian one. The column is about ten times its diameter. The space between the pairs of columns is divided into six by moulded stone mullions, and was probably at one time a window, but is now blocked up with masonry. Here again the ball flower ornament is extensively used. The whole is then crowned with curiously shaped pediment, which stands about 7 ft. 5 ins. at its highest point.

The porch is beautifully constructed throughout. It formerly contained a chime of bells and a clock.

On passing through the inner gateway we enter what must have been the chief apartment, and in it are the remains of a very fine old fireplace. Even the outbuild-

ings contain many interesting architectural features—the old barn in particular is worth looking at; some of them contain windows of the fourteenth and fifteenth centuries.

The architect of this wonderful piece of work was a young mason of the vale named Richard Turch. He was one of two nephews of a monk at Ewenny Priory. Having quarrelled with his brother he was sent by his uncle to the Continent to study architecture. He eventually reached Rome and became the favourite pupil of Palladio. After many years of faithful study in Rome he was seized with the desire to return to his native land, and so he arrived in Glamorganshire just in time to serve the wants of the Bassett of that day. He was instructed by Richard Bassett, Esq., to build the porch, and so we have the porch standing as a silent and magnificent monument to its creator.

He also designed the tomb which stands inside the chancel at Llantrithys Church and a large number of church windows in the vale. The Welsh Magna Charta was drafted and signed at Beaupré by the then owner, Sir Phillip Bassett, who became Lord Chief Justice of England. Beaupré is still in the hands of the Bassetts, and stands as a monument to an eminent architect of the vale of Glamorganshire.



The Flat Fee as a Measure of Equity.

By JOHN LAWRENCE MAURAN.

About ten years ago one of our most loyal and important clients came to us with an alteration and remodelling problem involving a considerable expenditure compared to the result he was seeking. He was, as we well knew, a timid man in matters wherein architects feel they are on their home grounds, although bold enough in the financial and real estate field. The exigencies of time and the character of reconstruction led us, as a condition to fulfilling his wishes, to insist on the selection of a certain contractor on a cost plus basis, and in spite of the fact that in those good days now gone by the "cost plus" had a definite limit of liability of about two hundred thousand dollars, our client showed his timidity by hesitating over the indefinite amount of our fee of ten per cent. Although we could hardly fathom the causes of hesitancy, the inspiration of the moment led us to suggest that we would do the work—whatever it might cost—for a flat fee of twenty thousand dollars. With unmistakable relief he seized upon the suggestion and everyone was happy even upon the day of completion a week ahead of time and with a saving of over seventeen thousand dollars. There is a psychology in it, for in spite of paying us some seventeen hundred dollars more than ten per cent. he had found security against the bugbear of increased costs involving increased architects' fees.

Now every architect worthy of the name would hotly repudiate the implied suggestion of bad faith, but we must remember that often the client's mind visualises added fees with any suggested betterment, no matter how high his confidence in the disinterested character of the suggestion.

From the deep impression left on us of the satisfaction of the owner we profited a little later on when he retained us as Architects for the first reinforced concrete building of any importance in St. Louis. It was an eight storey wholesale building covering an entire city block and at an early stage in the negotiations we perceived symptoms which led us to repeat our offer of a flat all-inclusive fee.

Our attitude through both these experiences was a more or less passive acceptance of the state of mind of a client, but quite recently we caught again the same note in the comments of clients during preliminary conferences, sounding a vague alarm as to skyrocketing of the fee in case of a pyrotechnic display in building costs.

This turned our thoughts to the two previous experiences, and changed our attitude from a passive one to an active advocacy of the fixed and all inclusive fee and late in 1919 when the material market had all the symptoms of an ascending escalator, we expressed our desire to fix in advance the *exact obligation of the client* for full architectural services including the fixed fees which we in turn agreed to pay the engineers engaged by us on work in their various branches.

Of course, the percentage system applied to the estimated cost furnished the basis for determining the fee named, but the fact that it was *fixed* gave our clients every assurance that their interests were paramount, and hence while we were bending every endeavour to protect them against spectacular advances there could be no possible ground for even the unformulated suspicion that we, too, were profiteering at their expense through the unpreventable increases in cost over the already high level of the moment.

While there was a certain amount of surprise expressed, there were unmistakable signs of appreciation of what commended itself to them as to us, as a businesslike co-operation insuring justice to all concerned, for the surprise centred about an

unsuspected flexibility of the architect's mind in his methods of calculating his remuneration.

It may prove of interest to record the rather unusual method we adopted in the handling of these commissions under very unusual and very trying conditions. First of all we urged the immediate *selection* of a contractor of proved ability in the particular type of work, of absolute integrity and whose conditions of other work in progress at the moment justified such a step.

We further assured our clients that they could engage such a contractor to perform the work at cost plus a *fixed fee*. We also pointed out that in the purchase of material long in advance of the preparation of plans and specifications, that the logical method of handling such an undertaking was through the functioning of a "Committee of the Whole," consisting of owner, architect, contractor, the owner's operating engineer or manager and the architect's engineers (structural, mechanical, electrical, etc.) sitting together with one common purpose to discuss, decide and act on every matter whether of purchase or the choice of methods and materials.

Another phase of "all-inclusiveness" as pertaining to the Architect's fee (however arrived at) is the oft-time unspoken objection in the client's mind to the little understood separate payment of the clerk of the works, as well as the engineers. One of our clients voiced this feeling recently when he blurted out "we paid for your superintendents on the last job." From our recent experiences I can vouch for the fact that while we have been fully reimbursed, our clients' satisfaction in the "all-inclusive fixed fee" has fully justified its adoption.

In looking back over the operation of the "Committee system," the application of the "fixed fee" to sub-contractors as well as the general contractor, and especially to our own "all-inclusive fixed fee" for architectural and engineering services, there were many occasions which spring to mind when we were thankful, indeed, not only because the disinterested character of our services excluded them from the often trying discussions over jumping prices, but more particularly because of the comfortable feeling that while we were being adequately paid for the service rendered, we were not profiting by the misfortunes of our clients, and so we feel that we can conscientiously commend to the profession and to our future clients, "the flat fee as a measure of equity."—*The Journal of the American Institute of Architects.*

Registration in South Africa.

At the first South African Congress of Architects, held at Johannesburg last September, it was decided to proceed with a Union Registration Bill on the basis of the proposed Architects Act for 1913, and to make a levy of two guineas per head on the membership of the constituent bodies represented on the Executive Committee, of which the Society's S.A. Branch is one.

Sand Lime Bricks from Waste.

Professor Laurie, in his final lecture at the Royal Academy on November 23 at 4 p.m., will deal specially with the sand lime brick and the manufacture of this type of brick from waste materials, such as blast furnace slag and burnt shale. Any members who would like to attend the lecture should communicate with the secretary.

Notices.

By-law 51. A member (in any class) shall be deemed to have knowledge of any by-law, regulation, rule, announcement or other notice issued by the Society or by the Council and published in the Journal as if the same had been served separately and personally or by post upon such members, but in all matters affecting the alteration of the Society's Articles of Association notice shall be sent to all members as provided by Articles 68 and 69 of the Society's Articles of Association.

Ordinary Meeting.

An Ordinary Meeting of The Society of Architects will be held at 28, Bedford Square, London, W.C.1, on Thursday, November 10th, 1921, at 6 p.m., for the election of new members and other business.

Obituary.

BUTTERS, JOHN, Member (1910), of Ludlow, September, 1921.
BRINKWORTH, R. E., Member (1909), of Bath, September, 1921.
SANJANA, N. J., Member (1893), of Bombay, September, 1921.

Competition Conditions.

The Society has filed for record the conditions of the following current Competitions:—AUCKLAND (N.Z.); HARROGATE (War Memorials); WATFORD (Hospital); "DAILY MAIL" (Labour-saving House); HASTINGS (Music Pavilion); ILFORD* (War Memorial); SOUTHEAST* (Pier Pavilion); BURY* (Cinema).

* Barred to Members of the Society.

Addresses Wanted.

The Society's Journals sent to the following members, &c., have been returned through the post marked "Gone away." The Secretary will be glad to hear from anyone who can put him in communication with any of these members.

MEMBERS.—H. A. Aitken (London), N. Boothroyd (London), J. C. Broderick (Montreal), H. Byron (Ilford), F. A. Coyle (Consett), G. W. Campbell (Johannesburg), D. M. Davies (Caerphilly), W. E. De Souza (Golders Green), G. L. Evans (London), J. D. Fyvie (France), L. C. Hutton (Ashted), C. Hay (Calgary), G. A. Joslin (London), T. E. S. Pitt (Yeovil), A. W. Street (Corsham), E. C. Surtees (Barnard Castle), E. F. Tomlins (Golders Green). STUDENTS.—S. H. Collins (London), S. J. C. Denning (Tiverton), H. Fyvie (Pretoria), R. C. Van der Schyff (Pretoria).

Binding Cases and Index.

Binding Cases for Volume XIV. of the Journal, price four shillings each, may be obtained from the Secretary. There is no charge for a copy of the Index.

THE
Journal
OF
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Including Transactions and Architectural Notes.

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DECEMBER, 1921.

New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.

Notes from the Minutes.

ANNUAL DINNER.—It has been decided to resume the Society's annual dinner, and the first function of the kind since 1914 will be held early in the new year.

BUILDING INDUSTRIES CONSULTATIVE BOARD.—A notification has been received from the R.I.B.A. intimating that as the representative bodies of the Building Employers had withdrawn from the Board no useful purpose would be served by continuing its existence.

VACANCY ON THE COUNCIL.—To fill a vacancy caused by the election of Major Skipper (F.) as a Vice-President, it was decided to co-opt Mr. H. A. Cooper (F.), of Kettering, for the remainder of the term of office vacated by Major Skipper.

NEW MASTER IN CHANCERY.—The congratulations of the Council have been conveyed to Mr. W. Valentine Ball, O.B.E., Barrister-at-Law, a member of the Society's Board of Professional Defence, and a contributor of legal notes to the Journal, on his appointment as Master in Chancery.

THE SOCIETY'S COMPETITIONS.—The Assessors have awarded prizes of the value of £4 4s. 0d. and £2 2s. 0d. respectively to R. D. Coldham, Licentiate, of Barnet, and E. S. M. Green, student, of London, for measured drawings, and have awarded the Architectural Scholarship, value £15, for measured drawings, to Mr. J. H. Hampton, Licentiate, of Paddock Wood.

A.S. AND A.P.U.—The Council has decided to support the Union in its representations to the Ministry of Health in regard to the employment of architect's assistants on the plans of public relief works, and has also agreed to co-operate in a conference should one be arranged on the subject of the prevention of overcrowding in the architectural and surveying professions.

Proceedings of the Society.

An Ordinary Meeting of The Society of Architects was held at 28, Bedford Square, W.C.1., on Thursday, November 10th, 1921, at 6 p.m. In the absence of the President, Sir Charles Ruthen, the Chair was taken by Major C. F. Skipper, Vice-President, and the minutes of the previous meeting, as published in the *Journal*, were taken as read, and were confirmed and signed.

The following announcements were made :—Nominations: For Fellowship, 1. For Transfer to Fellowship, 1. For Membership, 7.

ADMISSIONS :—

AS LICENTIATES :—BAKER, CYRIL STEPHEN, 8, Huntley Place, Laira, Plymouth; GREEN, OSWALD HOWELL, 15, Avondale Road, Truro; WOODGATE, JAMES AUSTEN, 14, Heathfield Avenue, Boxley, Maidstone.

AS STUDENTS :—CAMPBELL, JOHN WILFRED, Glenthorne, Park Road, West Hartlepool, IRESON, JOHN, Glenthorne House, Yaxley, Nr. Peterborough; PARKER, FREDERICK JAMES; 53, Victoria Terrace, Barrow Island, Barrow-in-Furness; PAYNE, DOUGLAS CHARLES, Lansdowne Lodge, Westbrook, Worthing; PERERA, JOSEPH PETER, Green Lodge, Moratuwa, Ceylon; WOODCOCK, FRANK EDWARD, 88, Dereham Road, Norwich.

RESIGNATION ACCEPTED :—C. J. CABLE, Member, of Bromley, Kent.

ELECTIONS :—The following candidates, whose nominations had been previously announced and published, were submitted for election under Articles 12 and 17 of the Articles of Association, and were declared to be duly elected :

FELLOWS TRANSFERRED FROM MEMBERSHIP :—ADAMS, EDWARD COATH, Bedford Chambers, Plymouth; FORD, CHARLES REGINALD, P.N.Z.I.A., Wanganui, New Zealand; LEVERTON, WALTER JOHN HOPKINS, H.M. Office of Works, Westminster, S.W. 1.

RECOMMENDED BY THE SOUTH AFRICAN BRANCH :—WILSON, JOHN ALLEN, Sackes Buildings, Johannesburg.

MEMBERS :—FORREST, ALEXANDER, Sackes Buildings, Johannesburg; HYLAND, HENRY, Hastings, New Zealand; SHEARLEY, FREDERICK HORATIO, 1, Featherstone Buildings, High Holborn, W.C.1; WILLIAMS, ALBERT ERNEST, Gisborne, New Zealand; YATES, CHARLES WILLIAM, 71, Worrall Road, Clifton, Bristol.

THE SOCIETY OF ARCHITECTS QUARTERLY COMPETITIONS.—The following awards were announced :—

OCTOBER 1921 QUARTERLY COMPETITION. MEASURED DRAWINGS.—R. D. COLDHAM, Licentiate, of Barnet, £4 4 0; and F. S. M. GREEN, Student, of London, £2 2 0.

ARCHITECTURAL SCHOLARSHIP 1921. MEASURED DRAWINGS.—JAMES F. HAMPTON, Licentiate, of Paddock Wood, £15 0 0.

The proceedings then terminated.

Reviews.

The Editor will be glad to hear from any members who will occasionally undertake to review books for the *Journal*. It will be convenient if those who are able and prepared to do so will state their preference for works of an historical or technical nature.

"Architecture and the Allied Crafts."

MR. IVOR BEAUMONT (member) in the course of a paper read on October 11th before the Institute of British Decorators, said the Art of Architecture interested everyone directly or indirectly, and if success was to be the goal in all that pertained to Art, those who had charge of municipal educational matters relating to Art should be given control and have a proper understanding with Municipal Authorities who did not realise their ignorance in Art matters, or ask for enlightenment.

The co-operation of the Architect, Sculptor and Painter with the Craftsman must be more intimate in character before the Craftsman would put forth his best efforts. There must be a closer union between Architecture and the Crafts if a healthy demand for and satisfactory development of the Crafts was to follow. Sculpture was at its best and in its rightful place when in close union with Architecture, so it was in the days of Michael Angelo, Donatello, Ghiberti, Luca della Robbia and other great Italians. The great Sculptors of the Renaissance had a true sense of design, which had its root in Architecture. Exhibitions of Sculpture in London and other cities had fostered the wrong view that Sculpture should be separated from Architecture, forgetting that Sculpture isolated is lost.

Too many people nowadays thought of Art only as picture painting. Yet Architecture entered into the life of a community more than mere landscape painting, and while they might exist without the latter they could not do without Architecture and the crafts connected with the Art of building, which is Architecture. Simplicity must be the keynote of good building, as was the case during the Egyptian and Greek periods. Architecture was only at its best when Sculpture, Painting and the Crafts allied with it worked hand in hand, and every Craftsman should have practical training in each branch of the Art, so as to enable him to understand materials and apply his design to them.

There were few specialists in the old days, and Architecture, Sculpture, Decorative Painting, Building Construction, were often practised by a single Craftsman. The basis of fine Architecture was good construction and design, and in the application of colour and design the men of the past were perfect masters. With a love of the beautiful which was a common characteristic in those days, they had only to study the palaces, temples and tombs of ancient Egypt, Persia, and Assyria to find that the Crafts in those days stood on high ground, most rich and imaginative, and complete in form. The Greeks and Italians loved beauty, and the artistic sense was common to all, so that there was a desire for the enrichment and beautifying of the interiors of civic and religious buildings.

In the Buildings of the past they had examples of beauty and utility and it was the business of the Architect and Craftsman to see that these qualities harmonised, and it was only by a thorough knowledge of the great architectural buildings of the past that they could hope to acquire taste and originality.

The present day should be a great one for Architecture. In the days of the great Mediæval builders when such excellent work was done both by Architects and the Guilds of Craftsmen, it meant something to be a member of a guild. (He did not mean a Trade Union!) The Craftsman loved his craft and took a pride in doing good work, because the question of pay was not the "Alpha and Omega" of his labour, and they badly need true Craftsmen to-day and a higher standard of quality in work.

To the Architect the Crafts of Mosaic, Fresco, Leadwork and Plaster-work and Stained Glass are full of interest. Than Mosaic there is no better medium for the

enrichment of Architecture. Italy was the finest school for the study of Mosaic work whether external or internally applied. This decorative medium was known to the Egyptians and Assyrians and was used profusely by them, and the possibilities of its marvellous colour effects led the great Mosaic craftsmen of the Byzantine period to use it on a large scale on the vast wall spaces and domes of public and religious buildings.

The cement joint and the glass cube were the two chief things in Mosaic work. The cement joint, therefore, should have its rightful place in the design, and the Mosaic should be simple in the number of colours and bold in treatment as it was usually to be viewed from a distance. The surface should not be smooth, as beautiful effects were produced by the light on the various surfaces of the Mosaic, and the composition should be decorative. Regarding the method of work the sketch design was first prepared, and where domes or vaults were concerned plaster models to scale were used so that the exact effect of the design when in Mosaic could be obtained. Full size coloured cartoons were also prepared and transferred to the surface for the Mosaic craftsman to work from.

Mosaic work in the old days was worked cube by cube to the wall itself and this was the best and quickest way. The surface was varied naturally by the pressure of the hand which greatly adds to the ultimate beauty of the work.

Another process of working was by the paper method where the design was traced and reversed on to sheets of paper or canvas, and each cube fixed face downwards with paste on to the prepared tracing.

Pieces about twelve inches in size were then taken to the place they were to occupy and fixed into the bed of cement. When the whole was set, the front surface of paper or canvas was removed by damping, and the right side of the Mosaic is seen to its best advantage. In connection with Architectural work, Mosaics should be at least twelve feet above the floor line, as it must not be too near the eye.

Some of the finest Mosaic work is to be seen at Ravenna in the Mausoleum erected by the Empress Galla Placidia in 441 A.D. The plan is in the form of a Latin Cross, roofed in by circular vaulting with a dome at the intersections of the arms. The dome is decorated with stars and completed by a cross in the centre, the four Evangelists being depicted below. The constructional lines are accentuated by borders of rich ornament. Gold is sparingly used, and the ground work throughout is a very deep and beautiful blue.

In the Church of Sant'Apollinare Nuova the Mosaic work in the nave is executed about twenty feet above the floor level. In each side of the nave are processions of Saints, worked in light colours on a gold ground and for the treatment of ancient costumes and architecture, the basilicas of Ravenna are worthy examples for study.

The Mosaic work in the Choir of San Vitale at Ravenna too is particularly fine, and the general effect of the figure work is broad and masterly.

Mosaic work should be conventional, architectural in character, and subservient to the architectural setting.

It is essential that there should be distinctness of outline in the ornament of the composition and each figure should stand out boldly. A band of ornament surrounding the Mosaic increases the effect of the decorative composition. At Ravenna the Mosaic cubes were $\frac{3}{8}$ " square and some of the outlines a little more than $\frac{1}{4}$ " only, and for variety the length of the pieces were often two and even three times the width of a tessera. The outlines are always commenced first.

Masterpieces of Mosaic decoration, full of beauty, richness and originality, can be seen in the glorious basilica of San Marco at Venice.

The Church of Santa Sophia, Constantinople, is a charming example of Byzantine Architecture and decoration in Mosaic. The great beauty of Santa Sophia is in its

plan. The four arms are of equal length, with a vast dome, and the centre supported by two semi-domes of similar size. The vaulting and domes are covered with Mosaic work. The vertical walls are of marble rich in colouring and having the notched fillet enrichment leading up to the gold Mosaic ground. The views of the nave from any point are unrivalled, and the eye is lead from one vista to another in endless variety.

Of modern work in Mosaic, the finest example is to be seen in the Westminster Cathedral, conceived by the late J. F. Bentley. It is an interesting building in the Byzantine style and is colossal in scale, 380 feet long by 170 feet wide with a campanile 300 feet high. The impression of vastness is given to the visitor as he enters the building. On either side of the nave marble columns support the vaulting of the aisles and galleries. The Capitals are elaborately cut in marble and vary in design.

Everyone interested in Mosaic work should find time to see this great architectural masterpiece. Although the interior is unfinished, the decoration of the Chapels in the South aisle is most successful in every way and the Craftsmanship of a very high standard.

The finest examples of the Sister art of painting are to be found in Italy. That great Craftsman, Michael Angelo, working alone for three years painting the vault of the Sistine chapel and Raphael who painted the Loggias and various rooms in the Vatican. Pinturicchio who was also a master of decorative painting at the height of his powers was commissioned to decorate the walls of the Library in Siena Cathedral. Giotto at Florence, Assisi and Padua has left works of Craftmanship which are held with esteem and reverence. These great Craftsmen have given beauty to the world through the expression of their extraordinary individuality. In that great work of the Sistine Chapel we have an illustration of Michael Angelo's knowledge of Architecture. The ceiling is divided into triangular compartments and the artist has painted the Prophets and Sybils with great architectural skill, he arranges subjects commencing with the Creation and ending with the Last Judgment on the end wall. The Loggia of Raphael in the Vatican and certain rooms called the Stanze consist of vast compositions, historical and religious. The application of form and colour in strict relation to the Architectural features produced a very rich and dignified result. At Assisi in the Upper and Lower Church of San Francesco there are excellent examples of Craftmanship by Giotto, also in the Arena Chapel at Padua and the Church of Santa Croce, Florence. These works are unsurpassed and prove that well arranged schemes of colour add to the Architectural effect. The principal constructive features should be expressed.

The Craft of Leadwork is closely allied to Architecture and was practised by the Ancients. The mediæval craftsmen used lead in many and wondrous ways and to beautiful use. Lead is peculiarly fitted for architectural work—roofing and water supply pipes—fonts and rain water pipe heads—statues and vases in garden architecture. Lead, like bronze, is practically imperishable, and fineness of detail can be obtained by very simple means. Weathering brings to lead a whiteness or bleaching as white as marble. Lead was used in church architecture for covering timber spires, as at Harrow Church, and the Minster in Thanet, Chesterfield, and in Norfolk about the fifteenth century. Sir Christopher Wren had a great influence on the use of leadwork and the majority of his churches in London had their spires covered with lead. The dome of St. Paul's Cathedral is also covered with lead and Wren showed how lead could be used artistically in the building up of mouldings and ornament in the Spire of St. Augustine's, Watling St. The use of lead for rain-water heads is another instance where the lead craftsman shines. Examples of the employment of the material show it to be perfectly adapted to its purpose. Excellent craftsmanship in leadwork can be seen at Haddon Hall, Bramhall in Cheshire, Bolton Hall in Yorkshire, and Petworth,

Sussex. Although modern rain-water heads are mostly made of cast iron, there is room for the Craftsman to carry out his ideas in masterly craftsmanship.

The Craft of Plasterwork is closely allied with Architecture and can be divided into four traditional methods:—(1) Stucco Duro; (2) Parge work; (3) Plaster of Paris; (4) Modern Plasterwork.

In Stucco Duro work there are some fine examples to be seen in Italy. Raphael and his pupils were the means of spreading the Craft all over Italy and France. The work was executed in both low and high relief. Excellent work in this Craft can be seen at Hardwicke Hall.

Examples of Parge work are to be found in Devonshire and North Somerset. The patterns were worked in situ and were chiefly of the herring-bone, scallop and wavy line type. At a later period when the Architects Inigo Jones, Wren, Hawksmoor and Vanbrugh were prominent, plaster work became more deeply undercut, giving more shadow and colour. A large part of the work was modelled direct in situ with fine tools by Italians.

The work done during the time of Robert Adam and his brothers is chiefly in low-relief work. Good work is being done to-day in the Craft and also in the modern process known as fibrous plaster work, which is composed of Plaster of Paris, canvas and wood. Work done by firms such as Messrs. Martyn & Co., Cheltenham, George Jackson & Sons, F. de Jong, and Bankart, of London, is to be counted as excellent Craftsmanship.

It would take too long to speak on all the crafts connected with Architecture. Besides Stained Glass, there are the Crafts of Ironwork, Woodwork and Tapestry.

William Morris and Grinling Gibbons were masters of their Craft and had an immense capacity for work which was done as well as it could be, and a visit to the famous works at Merton Abbey would convince them that there was no sign of departure from the old order of things, and if Morris were to return he would find the dyeing and printing being done in the same old way as he left it. The Choir Stalls in St. Paul's Cathedral, London, and the woodwork and carving in Belmont House, Grantham, revealed the Master Craftsman in Grinling Gibbons. In conclusion, he expressed the view that the present representatives of good and sound Craftsmanship did their best to keep a high level in the Crafts connected with the Queen of Arts—Architecture.

Additions to the Library.

PRESENTED.

THE THINGS WHICH ARE SEEN	- - -	Trystan Edwards.
OLD LONDON ILLUSTRATED	- - -	The Builder.
ARCHITECTURAL OFFICE ADMINISTRATION	-	Technical Journals.
THE WORK OF THE R. E., 1914—19	- -	R. E. Institute.

PURCHASED.

ENGLISH CHURCH MONUMENTS	- - -	F. H. Crossley.
LONDON OF THE FUTURE	- - -	The London Society
FRAGMENT D'ARCHITECTURE ANTIQUE, 3 vols.		H. D'Espouy.

The Society of Architects Lodge and Chapter.

The consecration of The Society of Architects Chapter, No. 3244, took place on November 1st, 1921, at Freemasons' Hall. Mr. P. COLVILLE SMITH, Grand S.E., performed the ceremony, assisted by MESSRS. A. BURNETT BROWN, P.G.Soj., as H.; the REV. DR. OLIVER C. COCKREM, P.G.S.N., as J.; H. PERCY MONCKTON, P.G.St.B., as S.N.; and LIEUTENANT-COLONEL H. HAMILTON-WEDDERBURN, Dep. G.D.C., as D.C.

The following principals were installed:—MAJOR E. C. P. MONSON, P.G.St.B., as M.E.Z.; F. J. EEDLE, P.Z., as H.; and E. J. PARTRIDGE, P.Z., as J.

The other officers appointed were MESSRS. C. MCARTHUR BUTLER, P.Z., S.E.; WILLIAM HOE, S.N.; E. J. SADGROVE, Treasurer; THE REV. A. J. SMITH BULLOCK, P.S.; THOMAS WALLIS, 1st. A.S.; W. J. INGRAM, 2nd. A.S.; W. H. WEBBER, P.Z., D.C.; M. G. KIDDY, Organist, and E. J. W. HIDER, Stewards.

The remaining Founders were: MESSRS. A. G. WARE, P.P.G. Reg. Dorset, and P.G.Reg. Hants, and I.W., Acting-I.P.Z.; P. A. HOPKINS, P.Z.; A. G. LATHAM, P.Z.; J. H. PITT, P.Z., T. STEWART INGLIS, A. E. KINGWELL, JOHN KNIGHT, C. WRIGHT MARLES, and W. H. MAY.

Amongst the many Grand Officers who accepted invitations to be present were BRIG.-GEN. SIR WILLIAM WATTS, Provincial Grand Superintendent (Dorset); LORD ALDENHAM, P.G.S.N.; THOMAS H. GARDINER, P.G. Soj.; the REV. C. E. ROBERTS, P.G. Soj.; DR. H. MORLEY FLETCHER, P.G. Soj.; H. PASSMORE EDWARDS, P.G. Soj.; H. T. CART DE LAFONTAINE, P.A.G. Soj.; WILLIAM SPARKS, P.A.G. Soj.; C. E. QUICKE, P.A.G. Soj.; LIEUT.-COL. H. W. MORRIESEN, P. Dep. G.D.C.; COL. VICKERS DUNFEE, P. Dep. G. Swd. B.; SIR GEORGE ELLIOTT, M.P., P.G.St.B.; WALTER LAWRANCE, P.G.St.B.; ISAAC SEAMAN, P.G.St.B.; LOUIS E. HARFELD, P.G.St.B.; J. WILLIAM STEVENS, P.G.St.B.; EDWARD MONSON, P.A.G.D.C.; S. E. FITCH, P.A.G.D.C. and H. WARNER, P.G. Organist. There were also many Provincial Officers and other Companions present from Hampshire, Dorset, Devon, Lancashire and other centres.

The fourteenth Installation Meeting of the Society of Architects Lodge No. 3244 was held at the Holborn Restaurant on November 9th, 1921, when the W.M., Mr. W. HOE, installed his successor in office, the REV. J. A. SMITH BULLOCK, M.A., B.D., who appointed and invested his officers as follows:—

MESSRS. THOS. WALLIS, P.M. 875, S.W.; E. E. BARKS, J.W.; REV. T. LUKE BULLOCK, M.A., Ph.D., W.M. 1966, Chaplain; E. J. SADGROVE, P.M., L.R., Treasurer; C. MCARTHUR BUTLER, P.M., L.R., Secretary; F. J. EEDLE, P.M., P.P.G., Supt. Wks., Essex, D.C.; R. J. G. O'DONOGHUE, S.D.; M. G. KIDDY, J.D.; E. J. PARTRIDGE, P.M., L.R., Assist. D.C.; ALBERT E. PRIDMORE, P.M., L.R., Almoner; H. W. LOCKTON, P.M., L.R., P.P.G. Org. Notts., Organist; SHIRLEY KNIGHT, I.G.; H. W. MARTIN-KAYE, D. R. LYNE, H. W. BANNAN and H. PAUL, Stewards; H. W. WEBB, Tyler. Mr. W. HOE, the outgoing W.M., was the recipient of a P.M. Jewel from the Lodge, in recognition of his services.

Acoustics Applied to Buildings.*

By HOPE BAGENAL, A.R.I.B.A.

The principles which an architect should have in his mind when tackling any job involving the requirement of good hearing are not difficult to understand or to apply in a general way. But before studying them one thing is necessary. Speaking from experience, I do not hesitate to say that it is necessary to dismiss from one's mind the stock ideas about wires and sounding boards, about the impossibility of building one auditorium exactly resembling another, about Greek vases, about Dean Stanley whispering in Westminster Abbey; to dismiss all the stories and catchwords that are popular on the subject. Forget all those and go straight to the study of the Harvard experiments. Professor W. C. Sabine, of Harvard, was, so to speak, the Isaac Newton of the subject. That is to say, that after years of experiment it was he who evolved the law, the enunciation of which draws up the curtain upon accurate investigation.

First of all, Sabine showed that Acoustics as a science comes under quite a different category when we take into account not only actual quantitative experiments in sound propagation, but also the hall or the laboratory in which the sound is produced. Sabine, in introducing his work in person to the French physicists in 1917, says the following (reported in the communication of the "Société Française de Physique," April 13, 1917):—

"Experiments made in a laboratory are seriously affected by the surrounding conditions, by the fact that the walls reflect 94 per cent. of the sound if they are wood, 96 per cent. if they are plaster, and more than 97 per cent. if they are brick.

"Consequently experiments designed to measure sound under such conditions are equivalent to attempts at measuring light in a laboratory where the platform, the walls, the floor, and even the tables, are brilliant mirrors.

"In short, the difficulty is even greater in the case of sound. The law of the inverse square of the distance, so often accepted in laboratory experiments in sound, does not even hold as a first approximation. In fact, the sound is often less intense at the source than at a considerable distance.

"Again, there is another consideration that has been entirely omitted, the reaction of the hall itself on the source of sound. A source of sound of fixed amplitude is not necessarily a source of fixed emissive power. If it is placed in the hall in such a way as that the sound emitted is in the same phase as the sound accumulated in the hall, its emissive power is low. If in the opposite phase its emissive power is great. It is not at all difficult to find two positions of such a source where for a given amplitude the volume emitted is ten times greater in one case than in the other."

Sabine, of course, does not say all this for the sake of adding to our difficulties. He proceeds to analyse that "reaction of the hall itself upon the source of sound," and that reaction with all its consequences is what concerns architects.

Put briefly, Sabine's results may be stated as follows:—

Sound may be regarded as a form of energy.

When a fixed source of sound begins in a room two processes are set up at the same time.

First, energy is being generated at a constant rate. Second, that energy is being absorbed by all the surfaces in the room at a rate increasing with the total energy in the room until equilibrium occurs.

When equilibrium occurs, that is to say when the total absorption of the room equals the total energy generated and stored in the room, then the sound is a sustained sound.

When the source ceases the supply of energy is cut off, but the sound will continue until the total energy stored in the room is absorbed.

* A paper read before The Society of Architects in April, 1921.

The length of time taken to absorb that total energy stored in the room may be great or small, but it obviously has some relationship to the size and nature of the room.

It is therefore in the nature of an index; it is called the *reverberation*, and can be thought of in seconds. The relationship is this: Reverberation varies directly as the volume of the room, and inversely as its absorbing force.

It is important to think of sound as energy.

Some idea of the actual rate of expenditure of energy in producing sound has been obtained by several experimenters. Rayleigh found that in order to maintain the note of a whistle he had to supply about 66 kilogram metres of air per hour, i.e., as much energy as would lift a weight of about 145 lb. to a height of 32 feet. Marage has calculated that in ordinary conversation the rate of expenditure is rather less—30 to 48 kilogram metres per hour, while in a public speech it may vary from 144 to 288 according to circumstances. And the circumstances often depend upon the architect who designed the room in which the public speech is made.

When we have grasped the idea of sound as energy, it is not difficult to conceive of that energy being carried outwards in hemispherical waves from a source of sound until the energy is brought into contact with every, the least, and the remotest surface in the room. Nor is it difficult to conceive of how when the source of energy ceases, the sound thus carried at a uniform rate and reflected hither and thither will continue until the energy has been, so to speak, drunk up by contact with all these surfaces.

Lastly, it will be obvious that the values of the various surfaces as drinkers-up or absorbers will have an enormous influence on the length of time the sound will continue after its source has ceased, in other words, on the reverberation. It will be obvious, too, that the larger the room, that is the greater its volume, the greater will be the number of waves at a given instant, and therefore the greater the amount of energy stored in it requiring to be absorbed.

But that is only stating Sabine's law that the reverberation in a room varies directly as the volume and inversely as the absorbing power.

Or if we call the reverberation T seconds, the absorbing power A , and the volume V , it is equivalent to saying

$$T \text{ varies as } \frac{V}{A}$$

$$\text{or } T = \frac{V}{A} \text{ multiplied by a constant.}$$

What is this T , this reverberation, in actual experience? It is nothing less than the phenomenon that is at the root of nine-tenths of the acoustic difficulties that architects have to encounter. Reverberation is simply the element of redundancy that in so many well-known auditoria prolongs tones, drags the choruses, causes discords, blurs syllables, obliterates the ends of words, destroys articulation, besides having other indirect effects that we may examine later. Perhaps the most striking effect of reverberation is that it forces the ordinary twenty-five minutes' sermon when delivered in St. Paul's Cathedral to be cut down to at least half the number of words that can be ordinarily delivered in an ordinary-sized church in the same time.

Sabine's first experiment is so illuminating that it is worth glancing at it before we proceed. The Fogg Art Museum Lecture Theatre at Harvard was

so bad acoustically that a lecturer could hardly be heard intelligibly. A rough test showed that when the room was empty the reverberation for a syllable spoken in an ordinary tone of voice was $5\frac{1}{2}$ seconds. Now a speaker can deliver three syllables comfortably in a second, so that with a reverberation of $5\frac{1}{2}$ seconds the original syllable would have been followed by at least fifteen succeeding syllables. When an audience was present the conditions were better, but not tolerable. Sabine hit upon the idea of taking cushions of uniform size and material as units of absorbing power, and of introducing them by regular increments into the lecture-room. He found that when 486 cushions had been introduced the reverberation was reduced to 2.03 seconds. and when 1,500 cushions had been introduced the reverberation was still further reduced to 1.14 seconds. The experiments were made with an organ pipe emitting C 512, the reverberations being measured first by ear on a stop-watch, and finally by an electric communication to a chronometer.

The experiments were continued afterwards in a special room without windows, and for each increment of cushions introduced a mean of six reverberations was taken. The cushion areas were then plotted as ordinates against the reverberations as abscissae, and the resulting curve, an equilateral hyperbola, revealed that a very simple and very important relationship existed between the two quantities.

This relationship, when by further experiments it had been expanded and checked mathematically, developed into the formula $T = \frac{V}{A}$ multiplied by a constant K.

The constant K was found to be proportional to the volume V, and the ratio $\frac{K}{V}$ — therefore had some definite value. It was found to be 0.164 where the volume is calculated in cubic metres, and 0.05 when calculated in cubic feet. In the formula $T = \frac{V}{A} \times K$ we know, therefore, how to find V, and we have a value for K. How can A be calculated?

A, the total absorbing power of the room, we have seen, has to do with all the surfaces in the room. We can measure those surfaces that are distinct the one from the other, measure the plaster work, the woodwork, the area of carpet, of curtains, and so on. But how shall we know how much more one surface will absorb than another?

The value of Sabine's first experiments with cushions was that he had established a standard of comparison. The cushions could be removed and other materials tried, their effect being computed as the equivalent of so many cushions. Last year Dr. Alex Wood carried out a similar set of experiments at Cambridge with the same object in view. The pathological lecture-room at Cambridge had a reverberation of 5.2 seconds, which he reduced to 1.2 seconds by the simple expedient of introducing twenty army blankets and hanging them about the walls. But obviously neither cushions nor army blankets can be called scientific units. It would not sound scientific to be asked as an architect what, roughly, was the absorbing power of the Albert Hall, and to reply so many million felt cushions or so many thousand army blankets. Also, in order that a true criterion should exist, it is necessary to have a standard intensity of sound.

These points were thought out by Sabine. Instead of cushions, one square metre of open window area was taken as unity. The standard intensity of sound was taken as average speaking-voice intensity which is the same as the intensity of an organ pipe emitting a note equivalent to a million times the minimum audible. With these standards a long series of nocturnal experiments lasting six years were undertaken to ascertain the absorbing power of the chief materials used in building, fitting, and upholstering.

The results are given in the form of tables of co-efficients of absorption beginning with one square metre of open window equal to one unit.

TABLE OF CO-EFFICIENTS FOR VARIOUS MATERIALS.
(For Pitch C₄, Frequency 512.)

Open window	1.0
Glass of single thickness	0.027
Brick wall 18 inches thick in cement	0.032
Ditto covered with two coats of oil paint	0.017
Plaster on tile $\frac{3}{8}$ -in. and $\frac{1}{8}$ -in. coats	0.025
Ditto without finishing coat	0.034
Wood Sheathing, pine $\frac{3}{8}$ -in. thick on studding at 14-in. centres, varnished	0.104
Jute felt, 1.1 cm. thick	0.18
" " 2.2 cm. thick	0.54
" " 6.6 cm. thick	0.75
Felt 2.5 cm. thick hung 8 cm. from wall	0.78
Linoleum loose on floor	0.12
Carpet 0.8 cm. thick	0.2
Carpet over felt matting	0.5
Cretonne cloth	0.15
Shelia curtains	0.23
Audience per square metre, or sq. foot	0.94

*These co-efficients signify ratios and can be employed whether the surfaces to which they apply are measured in square metres or square feet.

But there are a few co-efficients calculated for a definite unit. The most useful of these are:—

	For Metres.	For Feet.
Audience per person	0.44	6.34
Ash chairs per chair	0.16	0.23
Cloth cushions to cover a single seat	0.135	1.95

The method of finding the absorbing power of a room is first to measure up the various areas in the room, plaster, panelling, carpet area, curtain area, &c., then multiply each area by its appropriate co-efficient, and add the products. The total absorbing power A can then be employed in the formula. Care must be taken to employ uniform units. If the volume is calculated in cubic feet the various wall, floor, and upholstered surfaces, must be calculated in square feet, and the constant 0.05 must be used.

Sabine's co-efficients do not by any means cover the whole range of building or lining materials. But they are sufficiently useful as an index of the relative values of materials for absorbing purposes. By their means it is possible to determine approximately beforehand from plans and specifications what reverberation to expect. If no co-efficient can be found for a surface of one material the co-efficient for another similar in structure may serve.

The absorbing properties of a material involve texture as well as surface. A porous material is more absorbing than a hard, close material. The co-efficient for brickwork is higher than for a hard plaster wall owing to the porousness of

the bricks. No co-efficient is given for a lining like bathstone or marble, so obviously a low figure, something less than plaster, could be used for approximate calculation, say 0.02. In America a very useful absorbent stoneware with a porous surface is manufactured and used very widely in modern church work. It is made to match the colour of the stonework used in the building, and is employed in vaults, domes and pendentives. This stoneware was used first in the West Point Military Academy Chapel and in a large Baptist Chapel in Pittsburg. Since then it has been improved, and is now manufactured with a co-efficient nearly six times the value of ordinary brickwork or masonry.

But it is necessary to consider what reverberation, what value of T is suitable for different buildings. It is by no means the same for all. Requirements differ, and here is a fundamental difficulty architects have to encounter. Frequently quite opposite requirements are demanded in the same building. A hall to seat four thousand people to listen to the speaking voice, will require reverberation reduced to a minimum. If the same hall is to be used for choral and orchestral concerts the reverberation should be not less than two seconds. What sort of a compromise must be arrived at? Or a small hall is required for quartettes, for piano music and trios. Requirements for these instruments involve a room in which the factor of absorption should be supplied by an audience alone. If the same room is also to be used for the male solo voice the factor of absorption should be supplied by curtains and felt panels in addition to the audience, for the purpose of absorbing overtones. Again, what sort of an attempt can be made to meet both demands?

I can only say that to understand the principle involved is the best chance of coming to the best solution of the particular problem. For the speaking voice, if reverberation is reduced to a minimum, in other words, if by means of absorbents, conditions similar to open-air conditions are insured, no doubt great distinctness is the result, but at what cost. The price you will have to pay is that very little sound energy will be stored in the room; a maximum of energy must therefore be constantly expended, and a speaker will have to exert himself physically to make himself heard beyond sixty or seventy feet. Some speakers like conditions of no reverberation, they are usually persons with powerful voices used to speaking in the open air, where the value of T is zero. On the other hand, conditions of long reverberation, say three seconds, may be preferred to open-air conditions by a voice of small power. But the price to be paid in this case is the danger that listeners near and far may hear the sound of the voice, but not the sequence of syllables.

One of the infallible symptoms, in practice, of an excessive reverberation is the fact that the louder the voice the worse the hearing. But a little thought must show that between these extremes of $T=0$ and $T=3$ seconds there must be a considerable mean range in which a moderate reverberation will ensure a moderate conservation of energy helpful to a moderate voice. The limit of T for the speaking voice is about two seconds for good practice.

From the practical point of view my own experience of auditoria makes me think that an architect should be specially on his guard against a long reverberation where small halls and lecture-rooms are concerned. It is quite possible to get a long reverberation in a small hall, and it is then specially annoying for the reason that the speaker is near his audience and expects to be able to address it flexibly and intimately.

The value of context and association as a factor in audibility must always be borne in mind. In church the loss of one word in five may pass unnoticed owing to the fact that we are so familiar with accepted religious phraseology that we unconsciously supply the missing words. This was proved by careful experiments undertaken at Adelbert College for the sake of improving the acoustics of a large Gothic chapel ("Science," New York, November, 1913, and August, 1915). They show beyond a doubt that the loss of one word in five when the factor of association was absent meant decidedly poor audibility.

The loss of one word in five, one in ten, and one in twenty, correspond to an audibility of 80, 90, and 95 per cent. In an unfamiliar discourse 95 per cent. means excellent hearing, 90 per cent. is fair, but if the number of words heard is only 80 per cent. of the whole the hearing is poor, and below 80 per cent. runs rapidly into unintelligibility. But where the discourse is familiar that 80 per cent. can be subconsciously supplemented so that in judging the acoustic properties of a hall the factor of familiarity or unfamiliarity may make all the difference between a verdict of good hearing or of decidedly poor hearing.

The reverberation requirements for choral and orchestral music rest on a different principle. Why is the best reverberation for a large concert hall 2.3 seconds? The reason is, that where music is concerned the hall itself is not only an auditorium for the audience but also an instrument to the sound. That is to say, that the difference between open-air conditions and indoor conditions is greater for music than for the speaking voice. This can be also understood by keeping in mind the idea of sound as energy. The difference between a musical instrument of one kind and a musical instrument of another (e.g., between a horn and a violin) is twofold. Not only has one instrument a different tone or quality to another owing to its peculiar shape, size, and material, but also and for the same reasons one instrument is actually louder than another. That is to say, the sound energy that can be produced by human movement in one case can be greater than in another. And mere size does not play a larger part in the differentiation than shape, structure, and material. The variable factors are the capabilities of the walls, and enclosed air spaces of the instruments to reinforce the vibrations at their source. Now these factors making for loudness and quality of tone of sound vibrations are not confined to the effect on the sound of the individual instruments alone. The walls and air spaces of the auditorium also have an effect, not equal in degree certainly, but of the same kind.

The energy of the original sound can be considerably modified, either reinforced, damped, or changed in tone-colour by the energy-condition of the room. And we have seen that the reverberation is an index of the energy-condition of the room. So that reverberation means in the case of music a real modification of the sound, and a reverberation of 2.3 seconds (that of the Gewandthaus at Leipzig), is usually taken as the most satisfactory modification for concert music. It is important to get more definite musical opinion on this point, but architects should know that the complaints on this score in concert rooms are usually complaints of deadness and dullness arising from insufficient reverberation. It is, I think, fairly established that without sufficient reverberation the tone of an orchestra of fine instruments such as the London Symphony is largely lost.

The demand in modern assembly halls for the maximum seating possible, together with the cutting down of cost, and therefore of cube and air volume, will lead to unsatisfactory results unless these principles are kept in view. The tendency now is to keep ceilings low, which is all in the right direction as far as conditions for the speaking voice are concerned, but when large and numerous galleries are provided the huge absorbing factor of the audience may easily reduce reverberation below the point satisfactory for concert music. Choral music can stand a

longer reverberation than orchestral music, but should not for the sake of accurate rendering exceed 2.5 or 3 seconds.

But in all these considerations of requirements for good musical effects there is one factor of enormous importance that must be kept steadily in view, and that is the factor of resonance. Resonance is the term given to the capacity possessed by certain materials to reinforce a sound by means of sympathetic vibration.

Let us turn again to the case of the musical instrument. It is the different resonant qualities of wood, of metal, of an enclosed column of air, that distinguishes one instrument from another in addition to size and shape. It can readily be understood then that the presence or absence of a material like wood in an auditorium would have an influence, unequal in degree but the same in kind, on sound production. And it undoubtedly has such an influence. Also from the analogy with a musical instrument the resonant material must be near the source of sound to produce a distinguishing effect.

On this principle therefore the value of wood panelling will be lost if it is placed in the neighbourhood of the audience. It should be placed near the orchestra and choir in a position of maximum concentration of sound. Then it will have a very real effect. The way a resonant material works is interesting, and should be borne in mind in all acoustic designing. Consider a large panel, one of a series round a choir recess in a concert room. The resonant nature of wood is to respond by getting into vibration whenever a sound is produced in its neighbourhood near in pitch to a certain definite tone. At first its vibration will be small, and the energy it absorbs will be small. If the sound is maintained, however, the sympathetic vibrations of the panel will increase, and therefore the energy it absorbs will increase. All this time the panel is acting as an absorbent, and its value in the room is as an absorbent only. But presently, if the sound in its neighbourhood be sustained, a point will be reached when the energy absorbed by the panel is sufficient to overcome its resistance to movement as a whole at each vibration. Then the whole panel becomes a sounding-body like the sounding-board of a piano, and itself a second source of sound so long as sufficient energy is supplied to it from the first source. If now the first source is stopped, the supply of energy will immediately drop below the point necessary to make the panel a sounding body, but it will continue to draw upon whatever energy is stored in the room, that is to say, it will immediately become an absorbent active against reverberation.

That is how wood panelling is well known as a reinforcer of sound, and yet at the same time is down on Sabine's schedule of absorbents as having a high average co-efficient.

With regard to the definite tone to which wood panelling vibrates sympathetically it may be objected that it is not desirable to have one tone only reinforced and not others. This would be true if the sharpness of resonance was so great as to reinforce a certain note only. But the sounding-board of a piano should dispel any alarm on this point. Maximum resonance occurs, of course, not on a note, but in a region of the scale. Special tests were made by Sabine on $\frac{5}{8}$ -in. North Carolina pine on studding at 14-in. intervals. The maximum resonance was found in the lower but not in the lowest part of the range. The position of this region of resonance is largely in the choice of the architect. It will be raised by increasing the thickness of the wood and lowered by diminishing it. It will be raised by diminishing the distance between the studding and lowered by increasing it. The best position for this maximum should be between C4 and C5, but as we get more light and more experiment on the subject, I am convinced that the way to tackle the problem will be to have an arrangement of panelling the same as far as appearances go, but varying in thickness and in the intervals of the studs, thus providing resonance over a wide range of tones.

If bearing these principles in mind we now turn to Vitruvius's chapter on the acoustics of Greek theatres, Book V., chapters 3, 4 and 5, we can see quite plainly that the Greeks were masters of some such arrangement for providing a reinforcement of energy by means of resonance. Their auditoria, open to the sky and holding a maximum audience, must have had the very shortest reverberation, and therefore when we consider their size, must have been badly in need of such a reinforcement. They used, not wood, but enclosed volumes of air, for their resonators, and from what we know of their *echeia* or acoustic vases, these vases were placed not in the neighbourhood of the source of sound, but in three tiers under the seats of the audience in the hemicycle itself.

In modern acoustic work enclosed volumes of air are used as resonators only when they can be brought in some sort of direct contact with the source of sound. Thus a six-inch air space below the floor boards of an orchestra pit or platform has been discovered to reinforce all tones equally, an eight-inch air space to reinforce tones in the middle register. This reinforcement is specially effective for 'cellos and double-basses that rest on the floor. It is also valuable for these two instruments, because both are liable to suffer loss of power in a crowded room.

With regard to the Greek *echeia* they were placed equidistant in a certain progression in pairs from the horns of the hemicycle inwards to the centre line. The first pair being placed at the extreme ends, the second pair next them on the inside, and so on to the seventh on the centre line. Each pair responded to a note, each note separated from the one on either side by an interval of a fourth. This scale was to be for the harmonic "genus," but in large theatres was repeated with variations in two other tiers for the chromatic and the diatonic "genus." Vitruvius's words, "By the adoption of this plan the voice . . . striking the cavity of each vase will sound with increased clearness and harmony from its unison with one or other of them," seem to suggest that the actors intoned their lines, and that their tones would be sure to find reinforcement from one pair of vases or another.

Vitruvius's most significant remark to my mind is that to the effect that theatres constructed of wood and having wooden floors do not require the system of *echeia*, "but when theatres are constructed of solid materials that is of rubble, squared stone, or marble . . . it is necessary to build them according to the rules in question."

There is no doubt that when wood is present in large areas in an auditorium, not only is the reverberation usually short, but also, and in despite of that fact, the tone and power of instruments and voices is full and powerful. Examples are, Covent Garden Theatre, La Scala Opera House, Milan, and the central chorus and orchestra at the Crystal Palace. I have no doubt, in my own mind, that the way to solve the problem of the necessary compromise in an auditorium is to reproduce good opera-house conditions, in other words, short reverberation and a large area of resonant material.

Resonant material then should be in the neighbourhood of the source of sound, absorbing material in the neighbourhood of the audience. But what about the common wall and ceiling areas in plaster, marble, or brick?

These surfaces absorb so small an amount of energy at each impact of a sound wave that it requires scores of impacts, that is to say scores of reflections backwards and forwards before energy is absorbed by their agency alone. Consider a room 40 feet square; sound travelling at 1,100 feet per second will be reflected backwards and forwards in it twenty-seven times in a second. If its walls are all hard plaster and its reverberation is when empty five seconds, a sound wave will travel 135

times to and fro before its energy is absorbed. But if the hard surfaces are inclined at such an angle that every sound wave will, in the course of one or two reflections, be directed to an absorbing surface, then we can understand that the inter-reflections and consequently the reverberations will be diminished. The inter-reflections specially requiring to be eliminated are those along the longer dimension of the room, so that the rear wall behind the audience is usually the most useful wall on which to place absorbent material.

This directing of sound waves by means of the hard plaster surfaces, inevitable in any auditorium, is an important item in acoustic design. Obviously the placing at a suitable angle of walls and ceiling surfaces is a matter for careful drawing out. Sound rays are reflected like light rays, and can be drawn out in the same way by setting out images of the source equidistant and opposite from the reflecting plane. But another object of the designing of reflecting surfaces is for the purpose of intensifying sound in the rear seats of an auditorium. If, in addition to the direct ray from a speaker's mouth to a listener in a rear seat, we can so arrange our reflecting surfaces that a reflected ray from the ceiling, one from a cove above the speaker's head, and one from each side wall (that is four additional reflected rays), shall converge upon that rear seat we shall have nearly as good audibility there as in a front seat.

Accurate designing on this principle, however, requires a fixed position for the speaker. The speaker or solo singer must stand on a rostrum or an area about six feet square marked out on the centre line of the platform. The most successful auditorium designed on this principle is the Hill Memorial Auditorium, University of Michigan, built primarily for the speaking voice, but designed to take a small choir also. Its volume is 800,000 cubic feet, audience 5,000, and reverberation 1.7 seconds, and when a speaker delivers himself from the rostrum position every member of the audience is said on expert authority to be able to hear his slightest inflection.

The design of reflecting surfaces should be governed by a simple rule derived from the known velocity of sound. If any seat in the auditorium is taken for the test and the speaker or source of sound is marked on the section or plan, then a straight line joining speaker and listener represents the direct sound path. But obviously there will be other sound paths to that seat reflected from various surfaces. Some of these reflected paths will be useful, as we have seen, and will contribute to the audibility, but in a large auditorium there may be other reflected paths which will be mischievous. All reflected paths exceed the direct path in length, but no reflected path should exceed the direct path by more than seventy or eighty feet. The reason is that too great a discrepancy in length between direct and reflected, means a time interval between the perception of the sound conveyed along the one path and the other. The shortest time interval detected by the human ear is one-fifteenth of a second, and in that time sound will travel in normal temperature between seventy and eighty feet. If the reflected path is so long in comparison with the direct path that more than that interval elapses, say one-quarter second or one-half second, then a marked redundancy is noticeable, and in extreme cases an echo. See Fig. 1 illustrating experiments at Illinois University.

The place for installing absorbing material when it is required to remedy reverberation is upon mischievous reflecting surfaces. Figures 2 and 3 are diagrams representing respectively beams of sound from useful and mischievous reflecting surfaces, caused by a speaker standing in a rostrum position. The beams of sound in Fig. 3 would require to be eliminated. But it is possible to eliminate them by roughening the surfaces with ornament and relief. A surface thus roughened will

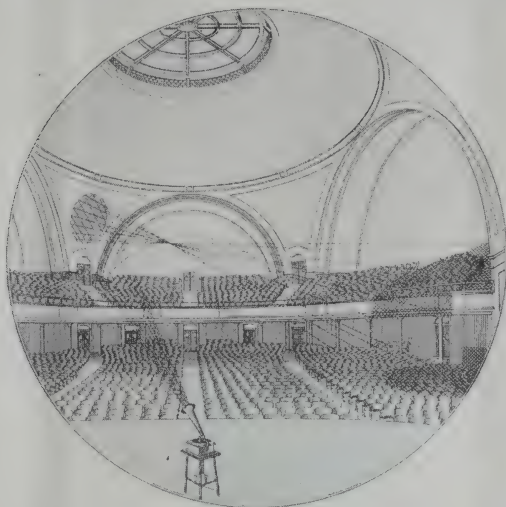


Fig. 1.—Auditorium, University of Illinois. Diagram showing an Example of a long reflected Path. Experiment by F. R. Watson.

diffuse sound rays somewhat in the manner in which a white surface diffuses light rays. This practice is a tradition in theatre buildings, and certainly minimises the risks of echoes. In optics, for a surface to diffuse light instead of reflecting it, the depth of the indentations must be at least one-tenth of the wave length. For light this is not a difficult matter, seeing that the wave length of white light is one-fifty-thousandth of an inch. In sound, however, the wave length of the speaking voice is slightly over three feet, so that on the same principle the depth of the reliefs and ornament should be at least $3\frac{1}{2}$ or 4 inches. Wave lengths for music, however, can be anything up to 16 feet, so that when surfaces are definitely causing echoes it is well to eliminate them by covering them with felt.

Felt, when used as an absorbent, should be laid on battens, so that an air-space is left between it and the wall; it should be covered with a cloth, stained, not painted, or a tapestry (see Fig. 4 illustrating the rear wall of the Little Theatre, N.Y.). The practical advantage in having a certain area of fixed absorbing material like felt is that you are more independent of your audience. A hall relying solely on audience for reducing reverberation may cause serious complaints if only half the audience is present, or on occasions such as rehearsals, when no audience is present.

The results of acoustic design in the matter of reflecting surfaces is noticeable in America in the shapes of many modern theatres, where the splay is used both on side walls and overhead (see Fig. 5 illustrating the proscenium of the Capitol Theatre, N.Y.). The ceiling, too, appears to be getting lower. But in all such questions the architect is more likely to be successful if he understands the principles of his subject than if he takes the latest technical watchword and applies it without understanding it. There is no doubt that an architect ought to ensure against an excess of reverberation in sound for his building, exactly as seriously as

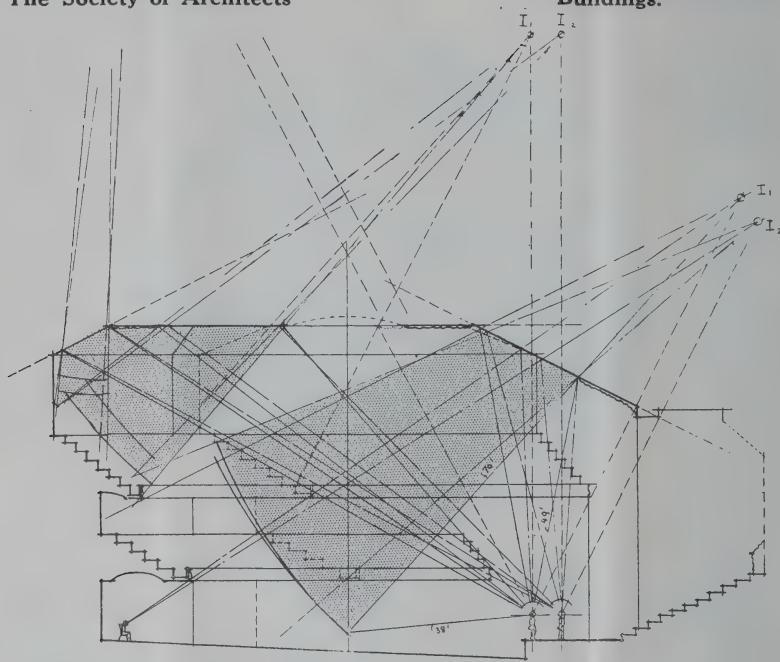


Fig. 2.—Speaking Voice. A Section showing Beams of Sound from useful overhead surfaces for two positions of a Speaker. Images of Source of Sound marked I.

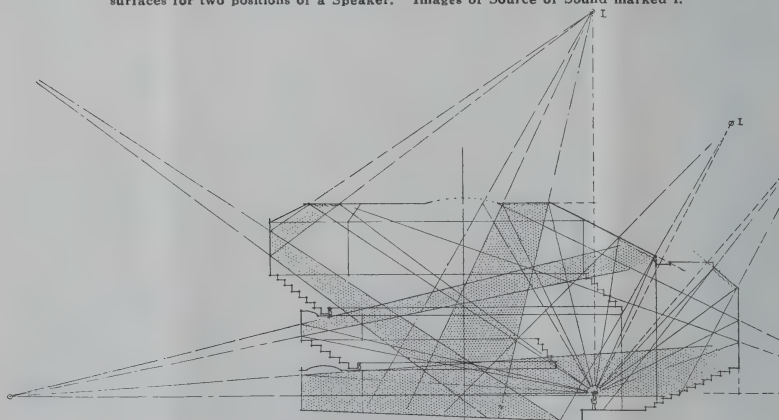


Fig. 3.—A Section showing Beams of Sound from mischievous surfaces which require to be eliminated by absorption or diffusion. Images of Sound marked I.

he would ensure an adequate supply of light. But he should be on his guard against the indiscriminate introduction of absorbing materials, and should remember that a few square yards in a strategic position may be as valuable as twice the amount in a bad position.

Before bringing this paper to an end there is one rather special type of auditorium I should like to speak about, because I have been recently studying it. It is the auditorium used for a large committee room, debating hall, or legislative chamber. Of course, if the rostrum system is used, that is, if each member comes to a central place to speak, the auditorium comes under a category we have already discussed. If, however, it is a hall in which at any moment a speaker may rise from any seat, and address the assembly, that is to say if, at any moment, the relative position of speaker and audience may change, then the requirements must be different. It must happen that when a speaker rises in front benches a large proportion of his audience is behind his back, and this difficulty will not be overcome by choosing the semi-circular plan, so popular for this kind of auditorium. Yet for this very reason some sort of a reflecting surface is required, because the direct ray behind a speaker's back is, roughly, only half the intensity of the direct ray in front of him, so that persons sitting behind a speaker will specially require reflected rays to reinforce the sound. Is there any reflecting surface that could be arranged which would be common to all positions in the hall, for front and back benches and chairmen alike? Obviously there is one very simple one; a flat ceiling at not more than thirty-five feet above the heads of members. It would require to be flat and unbroken over a certain minimum area ascertainable by diagrams, and could be ornamented round the walls. A ceiling is an excellent reflecting surface to use, because of the efficiency of the sound rays that go upwards from a speaker's mouth, avoiding obstacles like neighbours' coats and persons. Rays that go to the ceiling usually have a freer path, especially near the source, than rays that go to side walls.

But large committee rooms, especially legislative chambers, often have to be of a monumental height, far more than 35 feet, with galleries for distinguished strangers, quite putting the ceiling as a reflector out of the question. What must be done, then? Reverberation must be kept down at all costs, not only for the sake of distinct speaking, but because in legislative assemblies there are always persons moving to their seats or moving out, always a slight noise going on, which is magnified by reverberation and can become a serious annoyance. For this reason floor and gangways should be carpeted. It is important that, in any case, a speaker, without too great an exertion, may be able to make himself heard above this slight murmur of noise. Well, if not the ceiling, it may be possible to clear some wall, or portion of a wall normal to all positions of members, and use it as a reflector. A case came under my notice recently of a large parliament hall semi-circular on plan and considerably more than 35 feet high. I found that a wooden screen about 15 feet high along the diameter of the semi-circle would provide a reflector from every member standing to all other members sitting, and also from every member standing to a large part of the galleries round the semi-circumference.

A common trick in these halls is to hang a heavy curtain behind the chairman for the sake of effect. This should be removed and employed elsewhere. My own experience has been that remedial measures are more frequently demanded in this type of auditorium than in any other. Our hope must be, for this and for every other type of auditorium, that architects will no longer build them without any reference to their first requirements.

(We are indebted to the courtesy of "The Architect" for the use of the blocks illustrating this article.)

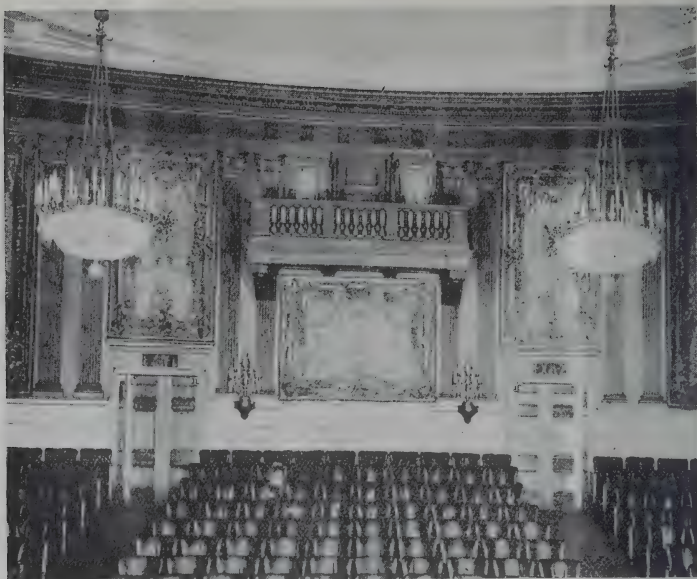


Fig. 4.—Little Theatre, New York. Example of Felt Panels placed on Rear Wall and covered with a Tapestry



Fig. 5.—Capitol Theatre, New York. View of Proscenium and Sounding Board. Thomas W. Lamb, Architect.

Notes of Recent Cases.

EDITED BY W. VALENTINE BALL, O.B.E., BARRISTER-AT-LAW.

Landlord and Tenant—Notice to Quit—Alternative Accommodation—Certificate of County Agricultural Committee—Effect of Certificate. Smith v Primavesi—Weekly Notes 22/10/1921, p. 291.

It is now well known that as a general rule where a landlord seeks to recover possession of a dwelling house which is affected by the Increase of Rent and Mortgage Interest (Restrictions) Act, 1920, he must be able to show that there is alternative accommodation available for the tenant. Where, however, "the Court is satisfied by a certificate of the county agricultural committee . . . that the dwelling house is required by the landlord for the occupation of a person engaged on work necessary for the proper working of an agricultural holding," the alternative accommodation need not be found. In the above case Mr. Justice Shearman and Mr. Justice Horridge held that it was sufficient to produce the certificate, and that upon that document being produced the County Court Judge had no power to enquire into the adequacy or otherwise of the alternative accommodation.

Building Contract—Fire in house in course of erection caused by Plumbers lighting fires in bedroom grates—Whether negligence. Waring & Gillow v Doughty—"Times" Newspaper, Oct. 8, 1921.

A householder employed the plaintiffs to reconstruct and redecorate a Georgian manor house near Hitchin. During the progress of the work a fire broke out, with the result that the house was burnt down. It was alleged, on the part of the householder, that the fire was due to the negligence of the plaintiffs in that certain plumbers employed by them had ignited a fire in the grate in one of the bedrooms for the purpose of their work. The learned Judge (Mr. Justice Sankey) held that the fire so lit ignited a beam in an old chimney. He was also satisfied, however, that the fire was not a roaring one, and that the plumbers use of it was not more or very little more than that of an ordinary bedroom fire, and that there was no negligence in their having used it in the way described. Judgment on this issue was therefore entered for Messrs. Waring & Gillow.

New Membership Certificate.

By-law 5.—Members elected previous to June, 1920, who desire to exchange their certificates for the new form of membership certificate issued since that date may do so on returning their original certificate to the Society and paying a fee of five shillings.

Such certificates shall bear the original date of election, but the signatories will be the officials of the Society for the time being empowered to sign such certificates.

The First Atelier of Architecture.

This Atelier is one of the Royal Academy Ateliers, and membership of it confers a distinction which is valued by those who are acquainted with the qualifications of the Patron, who regulates admission. There are at present a few vacancies, and those who desire further information should apply, preferably personally, to the Patron M. Chaurès, at the Atelier, or to the Hon. Secretary, at 28, Bedford Square, W.C. 1.

Conditions of Appointment and Duties of Local Honorary Secretaries of The Society of Architects.

By-law 43.—The Council may appoint from time to time any Fellows or Members as Local, Colonial, or Foreign Honorary Secretary or Agent for the Society with such powers and for such periods as the Council may determine.

QUALIFICATIONS.

The person appointed shall be either a Fellow of the Society or a Member who is in practice.

CONDITIONS OF APPOINTMENT.

(1) Local Honorary Secretaries may be appointed by the Council in November of each year for a period of twelve months expiring on the 31st of October, such appointment being terminable by either party at any time on giving written notice to that effect. The Council may at their discretion fill any temporary vacancy or renew the appointment from year to year.

(2) Cessor of membership of the Society or of the practice qualification shall terminate the appointment automatically.

(3) On the expiration or other determination of the appointment the Local Honorary Secretary shall return to the Society any printed matter, stationery or other goods being the property of the Society in his possession, together with a statement of account.

(4) The Local Honorary Secretary shall on the 1st October in each year render to the Council a statement of account with vouchers for postages and any other incidental expenses incurred by him in the discharge of his duties and sanctioned by the Council, together with a remittance for any moneys due to the Society. The Society will refund to the Local Honorary Secretary such expenses.

(5) The Local Honorary Secretary shall not pledge the credit of or bind the Council or the Society in any way as agent or otherwise nor incur any obligation on behalf of the Council or the Society except under written instructions expressly given from time to time by the Council.

(6) The Society will supply the Local Honorary Secretary as required with any printed matter issued by it relating to membership, etc.

DUTIES OF THE APPOINTMENT.

(a) To promote the interests of the Society and its members in accordance with the constitution and regulations of the Society which may from time to time be communicated to him.

(b) To extend the influence of the Society by introducing candidates for membership into the various classes for which they are eligible and qualified, and to advise the Council on any points arising out of such applications.

(c) To assist the Society in organising and holding local examinations, meetings, visits to works, exhibitions of drawings, etc.

(d) To act if called upon as the Society's representative or delegate at Conferences and to report thereon to the Council.

(e) To notify the Society of any local architectural competitions, with particulars of the same, and to take the instructions of the Society thereon and to assist in obtaining a revision of the conditions, etc.

(f) To submit to the Council on the 1st of each month a report on matters of local professional interest generally and of particular interest to members locally.

(g) To keep the Society supplied with any cuttings from local newspapers and other information on professional matters of interest and to assist and advise in regard to communications to the local press.

(h) The enumeration of these duties must not be taken as excluding others of equal or greater importance or as unduly restricting the Local Honorary Secretary's activities and sphere of utility. Generally speaking, he should take the initiative in making recommendations from his personal knowledge of local needs and opportunities and in drawing the Council's attention to any matters in which he considers they might intervene, but he should not take action thereon himself without instructions from the Council.

The Victory Scholarship.

There is still a sum of £1,300 to be raised in order to produce an income of £100 per annum, required to provide the prize offered.

The Council acknowledge with many thanks the receipt of donations from Mr. E. H. Rouse (M.), Mr. E. H. Sills (L.), and Mr. H. G. O. Thomas (M.)

The Secretary will be very pleased to receive donations, which should be sent to him at 28, Bedford Square, W.C.1. The donors' names are published, without the amounts contributed.

American Architecture.

We invite the special attention of members to the Exhibition of American Architecture now being held at the R.I.B.A. Galleries in Conduit Street, London, W. It is open, free of charge, from 10 a.m. to 5 p.m., Saturdays 1 p.m., and ends on December 9.

Bildj.

The A.A. Pantomime to be performed at 35, Bedford Square, on December 13th, 14th and 15th, 1921, is billed as "a tragedy in dry rot." Anyhow it will probably be a case of "Oh, dry those tears," and as the tickets, 5s. and 2s. 6d., are going like hot cakes, early application should be made. All profits are to go to the Architects Benevolent Society.

Notices.

By-law 51. A member (in any class) shall be deemed to have knowledge of any by-law, regulation, rule, announcement or other notice issued by the Society or by the Council and published in the Journal as if the same had been served separately and personally or by post upon such members, but in all matters affecting the alteration of the Society's Articles of Association notice shall be sent to all members as provided by Articles 68 and 69 of the Society's Articles of Association.

Ordinary Meeting.

An Ordinary Meeting of The Society of Architects will be held at 28, Bedford Square, London, W.C.1, on Thursday, December 15th, 1921, at 6 p.m., for the election of new members and other business.

R.A. Chapter.

The first Regular Convocation of The Society of Architects R.A. Chapter will be held at the Holborn Restaurant on Wednesday, December 14th, at 5 p.m. Members who belong to other Chapters, and wish to visit the Society's Chapter, are invited to communicate with the Secretary at 28, Bedford Square, London, W.C.1.

Current Competition Conditions.

The Society has filed for record the conditions of the following current Competitions:—AUCKLAND (N.Z.); "DAILY MAIL" (Labour-saving House); ILFORD* (War Memorial); HORSHAM (Cottage Hospital); CAMBRIDGE (War Memorial).

* Barred to Members of the Society.

Papers for Session, 1921-22.

The Council of the Society invite offers of or suggestions for papers on questions of professional interest for the forthcoming session. The invitation is not confined to Members of the Society, and is extended to the members of allied arts, crafts, sciences and industries.

The meetings are held at 8 p.m., at the Society's Headquarters, 28, Bedford Square, W.C.1, on the second Thursday in the month.

Addresses Wanted.

The Society's Journals sent to the following members, &c., have been returned through the post marked "Gone away." The Secretary will be glad to hear from anyone who can put him in communication with any of these members.

MEMBERS.—N. Boothroyd (London), J. C. Broderick (Montreal), F. A. Coyle (Consett), G. W. Campbell (Johannesburg), D. M. Davies (Caerphilly), W. E. De Souza (Golders Green), G. L. Evans (London), J. D. Fyvie (France), L. C. Hatton (Ashted), T. E. S. Pitt (Yeovil), A. W. Street (Corsham), E. C. Surtees (Barnard Castle), S. Thorpe (Wakefield), E. F. Tomlins (Golders Green). STUDENTS.—S. H. Collins (London), S. J. C. Denning (Tiverton), H. Fyvie (Pretoria), R. C. Van der Schyff (Pretoria).

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JANUARY, 1922.

New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.

Membership Examinations, 1921.

Two Examinations have been held in 1921, in April and October respectively under the new regulations for admission to candidature for Membership in the Society. The results of the April Examination have already been given in the Society's Journal for July, but for greater convenience the complete results are now published together. The following candidates satisfied the Examiners:—APRIL: ARTHUR BOULTON, 21, Cavendish Gardens, Ilford, Certificate of Merit; HERBERT COLLINS, 81, Rookfield Avenue, Muswell Hill, N.10; JOHN CHARLES JAMES, 2, Redcliffe Street, Earl's Court, S.W.; FREDERICK JUNIPER, 29, Hildrop Crescent, Camden Road, N.7; and ARTHUR DOUGLAS PARHAM, 77, Birkbeck Road, Enfield, and P.W.D., Colombo, Ceylon, Honours Certificate. OCTOBER: ERNEST BOWER, "Wellhouse," Golcar, Huddersfield, Certificate of Merit; FREDERICK WALTER FOWLER GOOCH, 111, Sefton Street, Southport; JAMES O'HANLON HUGHES, 46, Maitland Park Road, N.W.3; CYRIL CHARLES GEORGE OSBORNE, Sheffield University, Certificate of Merit; and ERNEST WALL WINKS, 98, Bridge Street, Worksop, Notts., Honours Certificate.

AWARDS.—The Council have awarded a prize of Twenty-Five Guineas to ERNEST WALL WINKS, the holder of an Honours Certificate in the October Examination, as the best candidate of the year.

The attention of Licentiates and Students of the Society is directed to this method of qualifying for Membership. A new Syllabus containing full particulars of the Examinations will be issued shortly.

Entries for the April Examination, 1922, must be made on the prescribed form prior to March 1st.

“ Fire-Resisting Construction and Fire Prevention.”

The author of this Thesis, Mr. E. W. Winks, of Workshop, gained a Certificate of Honour in The Society of Architects Membership (2B) Examination in October, 1921, and was also awarded a prize of twenty-five guineas as the best candidate of the year.

Almost two thousand years ago the Emperor Nero played his violin and gazed upon his own handiwork; Rome, the Imperial City, was in flames. This was the first great historical fire of the world, of which there is any authentic record. It is important from another standpoint. After that date the Romans discarded their timber roof, and continued their wall construction in the concrete vault, which not only served to keep out the elements but was fireproof in addition. It is of no little interest, also to read that as early as the first half of the sixth century Justinian issued instructions to the Architects of St. Sophia, Constantinople, to make that building fireproof.

The necessity for such a measure being taken showed itself in a startling manner in the huge conflagration of 1666; the great fire of London and the drastic measures finally taken to stop it, showed the widespread havoc resulting from overcrowding, narrow streets, and the use of a non-fire-resisting material. Again the Cripplegate fire of 1897 is interesting as a recent modern instance, in which the influence of fire upon modern materials was chronicled for future reference and guidance.

The pecuniary inconvenience which may accrue to the individual, the material loss a fire may cause to a community, is of secondary importance compared with the question of loss of life, appalling instances of which might be cited in connection with recent fires occurring in large public buildings, particularly theatres. Building legislation in the matter is primarily directed to the safeguarding of life.

The most complete code of laws regulating fireproof construction and the means of dealing with an outbreak of fire, in this country, are set forth in the various Building Acts in force in the Metropolis. They have been framed upon careful observation and consideration of the past experiences, and the various causes, carelessness, accidental or otherwise by means of which an outbreak of fire may occur. Their object apart from prevention is to confine the outbreak as far as possible to the building; or section of the building in which it commences, so that it may be more readily dealt with by the Fire Brigades. Since all the buildings erected in London must conform to these requirements, and those erected outside the Metropolis to modified requirements in force in the particular district, a brief outline of the general requirements and principles contained therein at least will not be out of place.

The London Building Act of 1894 is the principal Act, the rest being either modifications thereof or supplemental thereto. Parts 6 and 7 of the principal Act deal with the construction of buildings generally, but principally with domestic buildings and shops. It states the height to which party walls must be carried above the roof, the proximity of timber to chimneys and flues and the precautions to be taken in various cases, and the separation of various buildings. Buildings over 125,000 cubic feet capacity must have lobbies, corridors, landings and stairs

of fire-resisting materials, and the stairs must in addition be supported on fire-resisting materials.

The first schedule of the principal act deals with the thickness of walls of various buildings which depends upon the unsupported length, height, and number of stories, and distance between cross walls.

The London Building Acts (Amendment) Act, 1905, deals principally with the means of escape in case of fire, and precautions to be taken in certain cases to prevent it spreading. Means of escape must be provided in the case of high buildings and to premises having sleeping accommodation for more than 20 persons. In certain cases means of access to the roof are required and defined. The roof of shops projecting 7 feet and over must be fire-resisting, whilst complete isolation must be provided where living rooms are over premises used for the storage of inflammable liquids such as petroleum.

The first schedule of this Act is an amendment of the second schedule of the principal Act, and is important in that it defines the materials which may be considered fire-resisting in the general sense, and for special purposes. It contains also the interesting proviso allowing for the addition to the present list of "any other material from time to time approved by the Council as fire-resisting," thereby allowing a little elasticity, a property which most acts and bye-laws invariably lack.

Part 3 of the London County Council General Powers Act of 1908 is principally concerned with the limitation of cubic space, and the rules for uniting buildings. It provides that buildings of the Warehouse Class shall not exceed 250,000 cubic feet, or shall be divided into sections not exceeding this capacity, and it is interesting to note that floors, where properly constructed, are deemed to be division walls. The Council reserve the right to extend the limit of cubic space in certain cases. The rules for uniting buildings stipulate the maximum size of openings and the material, construction, and thickness of the doors required to safeguard such openings; there must be a door on either side of all openings, and the whole building must be under one ownership.

Section 22, part 4 of the London County Council General Powers Act 1909 is important in that it defines in detail the material to be used and the minimum thickness to be provided in the protection of the various members of buildings of steel skeleton construction, in addition to details of practical construction with which, however, we are not concerned in the present instance.

The Factories and Workshops Act of 1901, Part 1, requires that every workshop employing more than 40 persons shall have adequate means of escape provided. The means of escape, and where such is to deliver is defined in the London County Council Requirements under the above Act, and the London Building Acts (Amendment) Act, 1905. The construction of external iron staircases is also dealt with in detail.

Moving Picture Shows and Theatres are dealt with under the Cinematograph Act, 1909, and The Metropolis Managements Act and Building Acts Amendment Act, 1878. The latter deals with the details of construction, lighting, heating, and means to be provided to extinguish an outbreak of fire. An island site is a desideratum in such a case, but the Act requires at least half the site to abut on a public way. The Act defines the minimum widths of stairs and vestibules, and states the sizes of openings allowed in the proscenium wall in addition to the stage opening. The stage must be isolated from the auditorium by means of fire-proof curtain, and separate electric lighting installations must be provided for each. High pressure hot water and steam heating are not allowed, and where radiators are used in conjunction with pipes on the low pressure systems, they must be

recessed in the walls so as not to form an obstruction in gangways and passages. Exits in all cases must be clearly defined.

The most interesting and greatest advance, however, in fire-proof construction in recent years are the regulations framed for Reinforced Concrete Construction by the London County Council under Section 23 of the L.C.C. (General Powers) Act, 1909, which were finally approved by the Local Government Board, and came into force January 1st, 1916. Prior to this reinforced concrete was confined to floors and internal walls, but may now be extended to the whole building, the minimum thickness for external walls being 4 inches. There are examples of buildings erected in this material prior to the date of approval of the regulations, but such were exempt from the Building Acts. His Majesty's Stationery Office, Waterloo Bridge Road, London, is an example. The above then represents a digest of the points requiring attention in designing a building which may be considered fire resisting. It also represents the *minimum* amount of protection that experience has dictated, but there are instances, such as, for example, our public libraries and art galleries in which treasures are housed that cannot be replaced, and large factories containing valuable goods, where it is desirable to make extra provision to minimise risk. Moreover such additional primary outlay required for the installation of the necessary apparatus, is amply compensated for by the reduction in the premium allowed by the Fire Offices, who have their own code of rules.

Most of the principal fire offices of this country belong to what is known as the Tariff Association. In other respects they are quite independent. The Association is mainly concerned with the fixing of tariffs for special risks, since the tendency of the non-tariff system is to reduce the premiums or rates charged to such an extent that business cannot be carried on successfully. In spite of the regulations contained in the Assurance Companies Act of 1909, which requires a deposit of £20,000 to be made with the Paymaster-General before a new company can be floated, the risk of bankruptcy is great in the case of large fires. By way of example the Baltimore fire of 1904, which cost £14,000,000, may be cited, whilst the conflagration following the San Francisco earthquake of 1906 was estimated at no less than £60,000,000. It is safer to deal with a tariff office rather than to attempt to economise by accepting a lower rate quoted by a non-tariff office, since such a procedure may prove in the long run to be penny wise and pound foolish.

The fire office regulations are not concerned with the constructive expedients employed, but principally with the materials and their resistance to the effects of fire, in addition to the damage likely to accrue from the water used in extinguishing the fire, which may in the case of a small fire be greater than that caused by the fire itself. Accordingly they recommend the insertion of "scuppers" in outer walls to get rid of the water, and sills to connecting doors to confine it as far as possible to one room. The maximum cubic space recommended in the case of ordinary buildings is 60,000 cubic feet in each compartment. Thus the tendency is to reduce the cubic space compared with that allowed by the London Building Acts. From a fire resisting standpoint this is excellent since the essence of good design is the separation into the maximum number of risks both horizontally and vertically. In the case of Cotton and Textile Mills generally they recommend a limit to the number of storeys, and confine the floor area of each compartment to 125,000 superficial feet. The rules also define the maximum area and height of connecting doors between compartments, and rolling shutters, etc., provided to door and window openings, and require the latter to be closed on Sundays

and at such other times as the premises are not in use.

There is nothing to compel anyone to build according to these rules, but such as do fall within them or conform to them are entitled to a special tariff, in just the same way as reductions are allowed where sprinkler systems and drenchers—to be described later—are installed.

Before considering the merits and demerits of the various materials and systems of construction in detail attention must be drawn to the excellent work which has, and is being carried out by the British Fire Prevention Committee. As a result of many tests carried out from time to time the committee proposed three standards of protection which were unanimously accepted by the International Fire Prevention Congress which met in 1903. These standards are:—

- (1) TEMPORARY PROTECTION WHICH IMPLIES RESISTANCE TO THE ACTION OF FIRE FOR $\frac{1}{2}$ HOUR.
- (2) PARTIAL PROTECTION WHICH IMPLIES RESISTANCE TO THE ACTION OF FIRE FOR $1\frac{1}{2}$ HOURS.
- (3) FULL PROTECTION WHICH IMPLIES RESISTANCE TO THE ACTION OF FIRE FOR $2\frac{1}{2}$ HOURS.

Each of the above is sub-divided into Class A and B.

The minimum temperature maintained throughout the tests varies between 1,500°F.—1,800°F. In the records published the minimum superficial area of floors, doors and partitions is given, and the thickness of the two latter stated. Floors are loaded with 1 cwt. or $2\frac{1}{2}$ cwt., according to whether partial or full protection is sought by those submitting the material for testing. At the end of the time specified above, a jet of cold water is turned on and maintained for two minutes (except for Class B full protection when the time is extended to five minutes) so as to render the conditions of testing as far as possible equivalent to the conditions prevailing in the case of an actual fire. The report of any particular test may be had on application to the Offices of the Committee, being simply a plain statement of the happenings during the test without any comments.

The fact that the Congress accepted the standards proposed by the committee is important as it will enable any tests carried out in other countries readily comparable, thus avoiding the confusion arising from such a system as that of our weights and measures.

The judicious application of materials according to their physical properties to meet a structural need under normal circumstances, and with a temperature which for all practical purposes is constant; the nice arrangement by means of which the steelwork in a reinforced beam is economically disposed to meet the maximum bending moment, and at the same time contribute its quota in resisting the shear as it approaches the supports, fall within the province of practical construction in its purest sense. They are outside the present enquiry except in so far as the eminent fire-resisting properties of one material are utilised to afford protection to another which is weak in this respect. We are concerned rather with extremes of temperature, intense heat followed by a sudden reversal with the application of water. The fundamentals underlying fire-resisting construction lie rather in the realms of physics and chemistry, in so far as they treat of the changes in properties and structure wrought by heat on solid bodies. The danger to be apprehended is three-fold. The material may be consumed, excessive expansion may take place, or disintegration may result.

The effect of applying heat in the form of a flame to wood is to cause it to burn, the change which takes place being a chemical one, and the wood is transformed from a useful constructive material to mere ashes. It should be very carefully observed, however, that everything depends upon the way in which the flame is allowed to attack the timber, for it is remarkable to note that timber baulks placed close together still form one of the best fire-resisting floors, particularly if plaster on expanded metal is used on the ceiling in addition. From an economical standpoint such a floor does not commend itself, and its use in this country is now obsolete. The destructive action of fire in this case is rendered extremely slow simply because the flame cannot "lick" or "get all round" the timber as it were. Hence the lesson to be learned from this is, that whenever timber is used it should have a solid backing. Anything in the shape of continuous cavities behind wood panelling or under wooden floor boards overlying concrete should be avoided as they allow the flame to get hold of the timber and tend at the same time to create draughts. There is, however, another side of the question which must not be overlooked, for, if such a solid backing be used it is essential that the wood should be bedded in mastic or dry rot may set in. From a strictly fire-resisting standpoint then, it is better to do away with architraves and door and window linings and use solid frames. Again the soft woods are inferior to the hard woods in this respect, indeed a few of the latter, such as, for instance, Jarrah—the product of the Australian eucalyptus tree—possess in their natural state good fire-resisting qualities. Certain hard woods, viz., oak, teak, jarrah and karri figure in the materials allowed for special purposes under the Building Acts, and may be used in their natural state for doors, verandahs, and stairs provided no part is less than $1\frac{1}{2}$ inches thick, which necessitates a 2-inch door being flush panelled to comply with the Act.

Since wood is such a common and useful material for general building purposes, attempts have been made to impart to it the requisite properties which it does not naturally possess. The various substances with which the wood is impregnated are of three kinds; those which form a protective substance on the surface of the wood when heated; those which fuse and form a glassy coating, and those which evolve gasses which will not support combustion. Aluminium sulphate is an example of the first-class, whilst ammonium phosphate combines the properties of the second and third. Solutions of borax and alum are also used, and there are several patents made up under various names on the market. Experiments on untreated and treated wood are being continually carried out by the Building Bureau of New York City. The information sought is the ratio between the area of the cross section of the test piece before and after the test, the duration of the flame after the removal of the fire; and the duration of the afterglow when the flame expires. The averages obtained by comparison of many tests tend to show that treatment of the wood with a fire-resisting solution reduces the duration of the last two observations to one-tenth in the case of soft woods and one-twentieth in the case of hardwoods, compared with the untreated samples.

On account of the nature of their chemical composition some woods cannot be successfully impregnated. Soft woods of a resinous nature should always be avoided from a fire-resisting standpoint owing to the turpentine contained.

The relative fire-resisting properties of building stones depend upon their chemical composition. Those which have a calcareous aggregate bound together by a cementing medium of the same nature are naturally the worst, since there is

always the liability of calcination at high temperatures, with corresponding loss of strength and finally entire disintegration. Limestones which are mainly composed of calcium carbonate should be avoided for floors, and altogether wherever possible on this account. The granites being igneous rocks of plutonic origin have, during their formation been subject to higher temperatures than is ever reached in any fire. The liability to disintegrate on this account is negligible compared with the tendency to split and crack caused by the unequal heating of the mass. All substances when heated expand in varying degrees. This is most apparent in the case of metals which are in addition good conductors of heat. Granite fails in the latter respect so that the outside which is exposed to the flames becomes hot whereas the inside of the block or casing is unaffected. The *unequal* expansion which results is a source of grave danger since internal strains are developed of such a powerful nature as to cause the whole mass to crack and fly to pieces, often accompanied by a loud report. The same difficulty is met with in the case of glass and cast iron. Granite, therefore, should never be used for heavy supporting piers on this account where there is any risk of fire, in spite of its great compressive strength. It should never be used as a protection for the supporting members in a steel framed structure.

Sandstones are the best from a fire-resisting standpoint, because they are composed chiefly of silica, which, being indestructible, is *fireproof*.

A good, sound, well built brick wall is still as good as any form for resisting the action of fire. Reports on the effect of the Cripple Gate fire state that ordinary stocks were unaffected, perforated bricks were broken to pieces, and blue bricks had their faces destroyed. A brick earth consists essentially of silica, alumina and lime. Both the silica and the lime are, taken separately, highly infusible substances, but when present together the latter, acting as a flux enables the silica to melt and combine chemically with the alumina to form silicate of alumina. Brick is a good fire-resister, and yet it is a poor conductor of heat. How then does it gain its ascendancy over granite? The reason is that the bricks are small, and that although the brick may be cracked by the inequality of temperature throughout its mass, such inequality can never amount to that prevailing in a large block of granite, so that even should the brick crack the defect lies in this instance in the individual rather than the mass. Again the mortar will allow for any slight movement. The choice of a brick will, of course, depend upon the position it is to occupy and where exposed to view, appearance will no doubt hold the day, but in cases where great extremes of temperature are anticipated, such as in boiler flues, firebricks which consist of 98 per cent silica should be used set in fireclay. This, in addition, will help to confine the heat and minimise the danger of fire from the proximity of any combustible material to the flue.

Brick is the first material we have considered as yet which is artificial, timber and the various building stones are all used in the same form as they occur in nature. Its method of manufacture necessitates it being subject to intense heat; it has, as it were, already passed through fire before it reaches the job, and it is a significant fact that such materials are invariably the best fire resistants.

Terra cotta is a valuable material not only on account of its lightness and adaptability to any required shape, but also for its eminent fire-resisting properties. There are three varieties, the dense, semi-porous and the porous. Their merit, from a fire-resisting standpoint, follows the same order, the dense being almost poor in this respect, the porous excellent. The latter is made by mixing either cork or sawdust with the refractory earth before burning, the small air spaces in

the resulting product acting also as non-conductors of sound. Concrete may be either a very good or a poor fire-resistant, according to the aggregate used and the proportions in which it is mixed. The cement should on all occasions be specified to conform with the British Standard Specification for Portland Cement, in every respect. From what has been said already it will be seen that sandstone is the best of the stones as an aggregate. Limestone should not be used, and granite, as may be seen from the result of the test quoted below, is not good. Thames ballast is dangerous. For ordinary purposes brick and sandstone mixed, or better still brick and terra-cotta, or clinker from destructors form the best aggregates. Where lightness is a desideratum in floors, particularly upper floors, and roofs, coke breeze or pumice may be used with advantage. Coke breeze requires very careful selection as there is always the liability of sulphur which has a destructive action on Portland Cement, and to which the breeze from small standing engines and pan breeze are especially subject.

The following summary of a test carried out by the British Fire Prevention Committee with various aggregates is of interest, in that it allows a comparison to be made, since the conditions are essentially the same. The aggregates used were Furnace Slag, Broken Brick, Broken Granite, Burnt Ballast, Coke Breeze, Furnace Clinker, Thames Ballast, broken to pass a $1\frac{1}{2}$ -inch ring. The sand used was pit sand, the cement British Portland, with water to the extent of 20 per cent. by volume. The proportions were 3 : 2 : 1: except in the case of coke breeze and burnt ballast which were mixed 5 : 1 without sand.

The bays were each 10 feet by 2 feet 7 inches and $5\frac{1}{2}$ inches thick, loaded with 2 cwt's per square foot. The centring was struck 14 days after setting, and 40 days allowed for drying.

The whole was subjected to the flames of a gas fire from below and a temperature between $1,800^{\circ}\text{F}$. and $2,200^{\circ}\text{F}$. maintained for three hours, followed by the application of water for two minutes. The result of the test showed that Thames Ballast and Granite were the worst these bays being cracked across and deflected in the centre. Next in order of accendancy came Furnace Slag and Furnace Clinker, then broken brick. The bays of Burnt Ballast and Coke Breeze showed no cracks, but a portion of the underside was washed off by the water in parts.

The correct proportioning of the ingredients composing a concrete, and the care exercised in mixing and incorporating them, go far in determining its quality. The densest possible concrete should be aimed at. The old rule of thumb method of 4 pts. aggregate, 2 pts. sand, and 1 pt. Portland Cement is somewhat haphazard when we consider the relative absorption of, say, granite and coke breeze, the former being negligible, the latter by no means so. Each aggregate should therefore be treated on its merit in this respect. A vessel of known capacity should be taken and filled with aggregate which has been previously soaked if of an absorbent nature. Into this first vessel water from a second vessel of known capacity should be poured, until the voids between the aggregate are occupied by the water. The volumes of aggregate and water required may be deduced, and the ratio existing between the two represents that of the sand and aggregate. Similarly the amount of cement required to fill the voids between the sand may be arrived at. It is better if the amount of cement thus determined is increased by 10 per cent. A concrete rich in cement has a low thermal conductivity, and a "wet" mixture has the advantage over one which is too dry since the water of crystallisation must first be driven off before disintegration takes place.

As a class metals are good conductors of heat and have a relatively high coefficient of linear expansion, which must be provided for when they are used on a large scale as in buildings or serious damage must result since the force developed is an irresistible one. If a girder is prevented from expanding in the direction of its length it must buckle. The amount to be allowed is very small, rarely exceeding in ordinary cases 1/16 inch; for this reason it is very important since it is liable to be overlooked. The temperature of a fire is taken as 1,700°F. in American practice. The melting points of the metals in common use in building construction are approximately: Tin 450°F., Lead 620°F., Zinc 790°F., Copper 1,900°F., Iron 2,900°F. It can readily be seen by comparison that the first three metals named are inadmissible in fire resisting construction. For that matter it might be pointed out that zinc will burn furiously at 500°F. Copper may be taken as being on the border line, and copper wire should be avoided, as a fixing for expanded metal to steel stanchions.

The Building Acts prohibit the use of any metal having a melting point below 1,800°F., and allow the use of copper as a material.

Metals, provided they have not previously melted become an incipient red colour at 1,000°F., at which temperature steel may have lost strength amounting to as much as 70 per cent. The sudden application of a jet of cold water to a cast iron column would cause it to snap or fly to pieces owing to the internal strains set up by unequal contraction, leading to the collapse of a whole floor or possibly the whole of the floors according to the situation of the column. The danger with steel work lies in the rivets being sheared through, and the buckling and twisting of supporting members, hence the necessity for protecting them from the effects of fire. Sufficient evidence of this necessity is presented by an examination of the remains after a fire of a building in which such protection has not been afforded, such, for instance, as the old-fashioned Lancashire cotton mill with its cast iron main girders and wrought iron subsidiary beams; the site represents a veritable wilderness of scrap iron, and all manner of fantastic shapes and contortions.

Apart from its advantages as regards cost, maintenance, ease and adaptability to curved surfaces, and its high sanitary and hygienic value, Reinforced Concrete is an excellent fire resistant provided due attention is paid to the selection of a suitable aggregate and every care exercised in supervision. In a building erected wholly of this material from foundation to roof there is nothing to burn save such of the contents as are of an inflammable nature.

The two materials, mild steel and concrete, are eminently suited for use together from all standpoints. The adaptable nature of the concrete allows of such a disposition of the materials that the physical properties of each are simultaneously developed. The steel supplies the tensile strength in which concrete is weak incidentally allowing a high compressional stress to be placed on the latter. The value of the concrete in the tensile flange which is neglected in calculations lies in the fact that it protects the steelwork from the effects of fire and reduces to a minimum any risk from loss of strength due to extremes of temperature, and rusting of the metal. One of the main factors as regards their suitability for use together is that the coefficients of expansion of the two materials are for all practical purposes the same. This is important as the principal defect of reinforced concrete, apart from the ready manner in which it will transmit sound, is the effect of the humidity of the air upon it. Provision for the expansion and contraction due to this cause must always be made in large buildings.

Leakage of electric current is also a source of danger since it corrodes the steel which is hidden from view. Periodic testing of the electric installation is an essential.

The first report of the Royal Institute of British Architects on Reinforced Concrete published 1907 recommended a minimum protection for steelwork of 2 inches for main beams and 1 inch for subsidiary beams. In their second report, published in 1911, these thicknesses were reduced to 1 inch and $\frac{1}{2}$ inch respectively. This was principally with the object of reducing the surface cracks which invariably appear on the underside of beams. They are not a source of danger, and unless the design is very bad there is little fear of the steelwork being exposed to the action of humidity of the air and fire. Their presence is due to the tensile stress at the extreme fibres where it is a maximum according to our accepted elastic theory, and although the size of the rods employed is made sufficient to take the whole of this stress it is not entirely confined to their sectional area. It varies from zero at the neutral axis, which in this case is not at the centre of gravity of the cross section, to a maximum at the extreme fibres. Hence the necessity of placing the reinforcement as near the outer face as is practically possible. In the case of large domes in this material where the hoop tensions are great the cracks may be comparatively large without danger provided the steelwork is not exposed. These surface cracks may be prevented and in many cases entirely eliminated by embedding expanded metal in the concrete just below the surface.

Glass is a brittle, transparent and translucent substance, which is combustible and has a high melting point. Its drawback lies not only in its weak transverse strength and sudden fracture but in the unequal expansion when subjected to heat causing it to split and fly to pieces in a fire, unless it is prevented from doing so by reinforcement. It resembles Cast Iron in this respect; both materials may be subject to strains internally even before fixing in position due to inequalities of temperature experienced during solidification. Glass used for fire-resisting purposes should be plate glass rough rolled with wire netting embedded for skylights, etc., and polished plate in electro-copper frames for situations where appearance is of importance. The maximum size of the frames or panels must not exceed 2 feet in either direction, and the size of the panes is limited to 16 square inches, and a thickness of not less than $\frac{1}{4}$ inch by the Building Acts.

All the foregoing materials—excluding soft woods—are included in the first schedule of the London Building Acts (Amendment) Act, 1905, under either the heading general or special materials. There are other materials, among which are some of the most highly fire-resisting, which are used principally as a protecting cloak to timber.

Slag wool or silica cotton may be described as a mineral cotton wool which it resembles. It is made by passing a jet of steam through a stream of molten slag. It is fire-resisting, soundproof, and an excellent insulator, and is used in floors and partitions, but where there is vibration it will crumble, being of a brittle nature, and lose its soundproof properties. It is sanitary, and prevents the access of vermin to partitions.

Asbestos and "Uralite" are excellent fire resistants. The former is a natural mineral product which may be had in a fibrous form or as a woven cloth or board. "Uralite" is a mixture of asbestos, chalk, and mineral glue. It may be obtained in sheets up to 6 ft. x 3 ft. x $\frac{3}{4}$ — $\frac{1}{2}$ inch thick, and is excellent for covering partitions and walls both internal and external in temporary wooden structures, such as hospitals, etc., which are required to be of a fire-resisting nature. It may in such

cases extend also to the roof replacing slates. Special pieces 3 inches wide are made for jointing, in such cases being bedded in red lead.

Plaster forms a temporary protection for both partitions and ceilings, but is quickly washed away by a powerful jet of water from a hose. The best plasters are those having a base of asbestos or other fire resisting material strengthened by being spread on expanded metal.

One of the principal disadvantages of treating wood with a non-inflammable solution is that such solutions are almost invariably hygroscopic; they imbibe water from a humid atmosphere. The remedy is to paint the woodwork so treated, and, fortunately, this does not interfere with the fire-resisting properties such a solution may possess. There are also many brands of fire-resisting paints on the market, such as Cyanite, Asbestos, and indestructible paint, to name only a few. These may be excellent in themselves and fulfil all that makers claim for them, but paint can only be looked upon as of a very temporary nature falling far short of even "temporary protection."

The term "fireproof" has been rigidly avoided throughout the whole of the description of the properties of materials with the single exception of silica or sand. There is no such thing in practice as a "fireproof" material; slag wool, asbestos and uraltite approach the nearest thereto, but they may become incandescent at very high temperatures. Materials are "fire-resisting" (to a greater or less degree according to their physical and chemical composition), a term accepted and recommended for general adoption at the International Fire Prevention Congress of 1903.

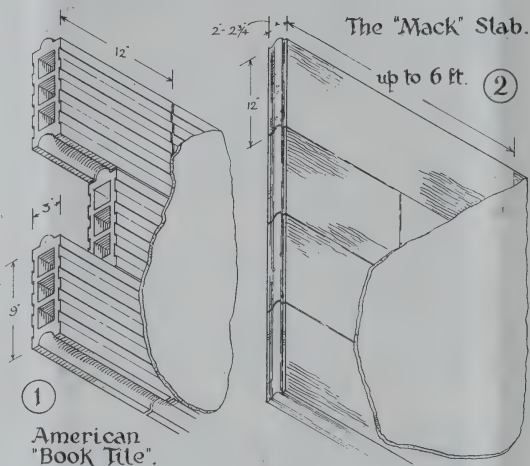
Having dealt with the fire-resisting properties of materials it now remains to describe the positions in which they are usually employed in the actual building, with a brief description of the outstanding features of each particular type which for the purpose may be divided into Domestic, Factory and Public buildings. Reference has already been made to temporary structures.

The walls being the supporting and enclosing members of a building deserve the first consideration. The confirmation of the Reinforced Concrete Regulations, allowing of the use of this material in external walls will no doubt in the next few years revolutionise construction in this respect. The minimum thickness allowed is 4 inches, provided the wall be reinforced. The principle is the same as that of the steel framed building, but the reinforced structure is unhampered by the fetters of the Building Acts in that with the thinning of the intermediate wall the structural lines of the supports are emphasised. It is noteworthy also that the tendency is to increase the window area, best seen in the recent factories erected in this material; the underlying spirit of the construction being Gothic in its purest sense.

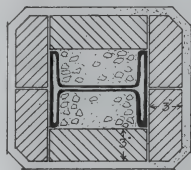
A limit is imposed by the Reinforced Concrete Regulations of the London County Council, which stipulate that the openings in any external wall shall not exceed two-thirds the area of the elevation of the building, and that the aggregate widths of all openings must not exceed three-quarters of the length of the elevation.

Apart from reinforced concrete brick still holds its own as the best and most universally used fire-resisting building material. In English practice the external walls are usually allowed to take their share of the loads of the various floors, being increased in the thickness from the top floor downwards in accordance with the regulations prescribed by the Building Acts. In America the function of the walls is that of enclosing members only, being carried on girders which take and relieve them of the floor loads, transmitting the whole of the loads to the supporting members direct. Under such circumstances there is no necessity to vary

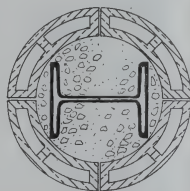
PARTITIONS.



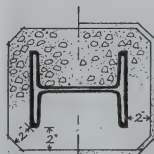
PROTECTION OF SUPPORTS.



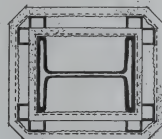
(3) Brickwork.



(4) Terra-Cotta.



(5) Concrete.



(6) Metal Lath
and Plaster.

the thickness; it may be the same throughout all storeys. Since the wall has merely to carry its own weight which is practically negligible there is no advantage in using a heavy material, so that terra-cotta is employed which is eminently fire resisting also.

The internal walls which divide the building into the cubic contents required under the Building Acts must, of course, go up with the rest of the building, but this does not necessarily apply to the subdivisions of the various floors which may be partitioned off as required and to suit the convenience of the occupants.

Partitions may be had in great variety of materials and various thicknesses, the minimum thickness under the Building Acts being 3 inches. Terra cotta blocks of the semi-porous or porous variety are the best. Such blocks are hollow and strengthened by midfeathers and keyed for plaster,

Fig. 1.—They are not filled but simply set in mortar and plastered, the air space thus affording a valuable means of insulating sound. Such a partition has been built of blocks in America to withstand the application of a jet of cold water following a fire, and has been awarded full protection. Class A. The same remarks apply to pumice concrete slabs except that they are not sound proof, whilst plaster and pumice slabs afford partial protection.

Fig. 2.—The two latter forms together with the coke breeze variety have the advantage of being in large slabs with consequent reduction of joints and increased rapidity in erection. They are not usually reinforced, and require careful handling before being placed in position. The size of the slabs is anything up to 6 ft. x 1 ft. and from 2 to 4 inches thick. The great advantage, from an economical standpoint, is the cost compared with brickwork and the saving of valuable space. All partitions should be independent of the floors; in other words, they should always be self supporting or separately carried.

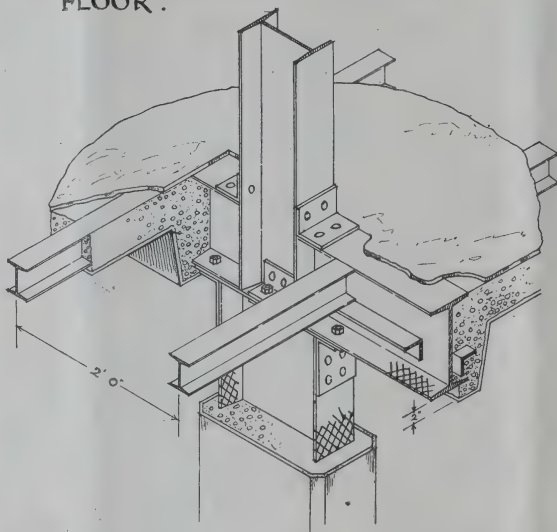
Glazed partitions may be used in special cases provided they are divided into panels not exceeding 2 ft. in either direction, and complying in other respects with the Building Acts.

Floors are in large buildings supported at regular intervals by pillars, which may take the form of steel stanchions or may be entirely of reinforced concrete. The latter are in themselves fire-resisting, but the former must be protected. The Building Acts require a minimum protection of 4 inches where they occur in external walls and 2 inches for isolated stanchions or pillars. The protecting material may take the form of brick, concrete, terra cotta or expanded metal lathing plastered.

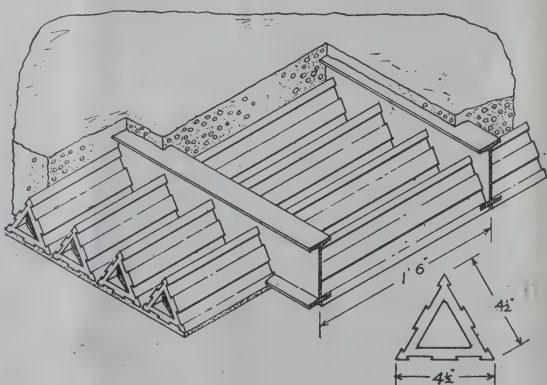
Figs. 3, 4, 5, and 6.—It is also required that no cavity be left between the protecting material and the face of the steelwork. Concrete is the most suitable owing to the similarity of the coefficients of linear expansion. Early forms of floors consisted of brick arches between girders of wrought iron carried by cast iron beams. The whole of the metal was exposed on the underside. The foolishness of such an arrangement was made painfully self-evident in several large fires, but the lesson taught by bitter experience was quickly learned and turned to advantage.

Modern fire-resisting flooring systems may be divided from a constructional standpoint into two great classes; those in which the steelwork is relied upon to take the whole of the load which includes the ordinary joist and concrete (Fig. 7), and all forms employing terra cotta lintols (Fig. 8) and the like between joists, and the reinforced floor in which both steel and concrete contribute their share. (Figs. 9 and 10.)

⑦ STEEL JOIST AND CONCRETE
FLOOR.

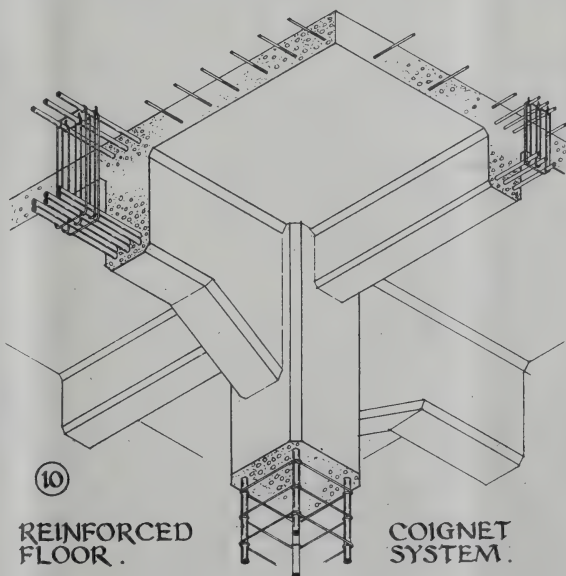
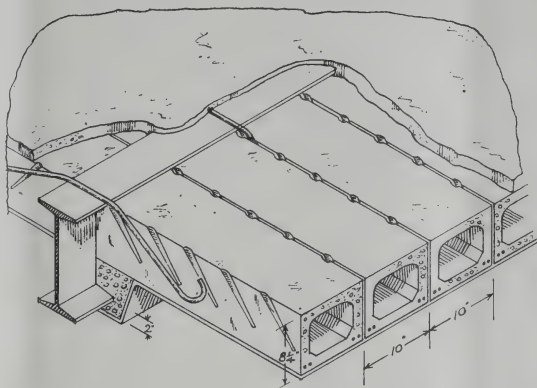


⑧ HOMAN AND RODGERS' FLOOR.



SEIGWART FLOOR.

⑨



In the first class of floor the concrete must be mixed on the job and placed in position whilst wet; in the second class of floor the concrete may be either mixed on the job or cast before bringing on to the job according to the flooring system adopted. The last named and the terra-cotta lintol systems have the important advantage that centring is not necessary, which allows of freedom of movement on the floor below during construction. The timbering required for centring is a very big item in the cost.

Examples of the first class are Faucet's Monlitherete, Homan and Rodgers (Fig. 8), Lindseys, Dawneys, Kleine and Columbian bar, the Johnstone and Frazzi, the two latter being American. Both the flat and segmental arches of porous terra cotta blocks between steel joists are employed extensively in America. Wherever an arch is used a tie rod must be provided to take the thrust of the two end arches of the series. The terra cotta has been replaced by bent corrugated iron sheeting in the Potter floor.

The second class includes the Hennebique, Considere and Coignet (Fig. 10) systems, in all of which centring is necessary, and the Seigwart (Fig. 9) and Herbst or armoured tubular, the first of which consists of hollow reinforced beams laid side by side and presenting a flat upper surface, the second requires the addition of a small proportion of concrete in the wet state, but is self centring.

Under the Building Acts the same rules apply to girders in outer walls as to pillars, but the thickness of the protection to the underside and measured from the edge of flanges must not be less than 2 inches.

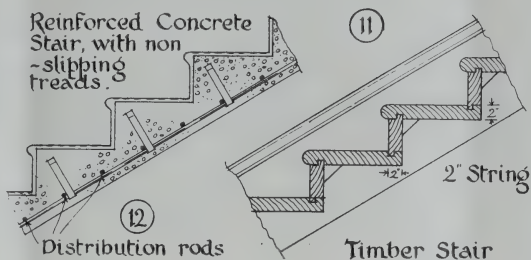
(Fig. 7) Girders and all steelwork other than that in external walls should have a minimum protection of 2 inches for main, and 1 inch for subsidiary beams and floor slabs.

Where concrete is used for the upper floors and roof of a tall building it is desirable, from the point of view of economy, to use the lightest materials consistent with good construction. Coke breeze may be used as an aggregate, and the terra cotta lintol system may be extended to the roof rendering it considerably lighter. Where slates are used as covering the battens may be nailed direct to the coke breeze; the slates may be replaced by asbestos or uralite. Asphalte laid in two coats and having a finished thickness of $\frac{3}{4}$ inch at least is the best for flat roofs, being a good fire-resister. Lead and zinc are, of course, out of the question, whilst copper is too expensive for any ordinary purpose. Under the Building Acts the roof of a shop projecting more than 7 ft. must have a fire-resisting roof 5 inches thick at least.

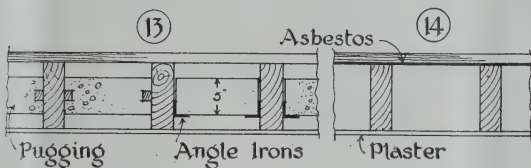
Staircases and elevators are the arteries of a building. They form the means of communication from floor to floor; all corridors and passages directly or indirectly lead towards them. They form the principal means of exit in case of fire, and for this and other reasons one of the chief sources of danger. They form one of the principal means by which a fire spreads from floor to floor of the building which applies especially to elevators since they must of necessity have a shaft or well which is straight from top to bottom. This, unless special precautions are taken, may act as a flue up which the flames will roar. The planning of staircases and elevators is therefore a matter of great importance. Wherever possible a staircase should be placed on an outside wall and deliver direct into the open air. It is better still to arrange it in a small block of its own attached to the main building. The door at the bottom should be fitted with panic bolts, open outwards, and have a minimum width in the clear of 4 ft. 6 ins.

Large timber baulks form a good stair where appearance is no object. Where

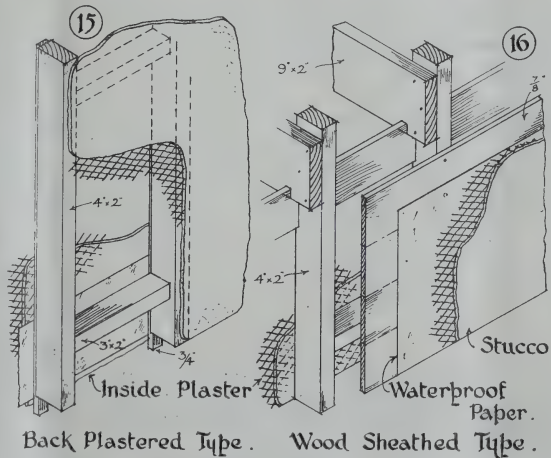
STAIRCASES.



FLOORS.



AMERICAN FRAME CONSTRUCTION.



wood is used it must be hardwood at least $1\frac{1}{2}$ inches finished thickness for all parts (Fig. 11). Stone steps of the hanging variety should be rigidly avoided. They are absolutely dangerous, allowing the fire to lick round them, facilitating disintegration; when stepped upon or water applied they will snap off, cutting off the principal means of escape. Reinforced concrete forms an excellent staircase, but the treads must be rendered non-slipping. (Fig. 12.) In good class work where appearance is essential various facings, such as marble, may be used.

From what has been said it will be seen that from a fire-resisting standpoint staircases should always be enclosed, and that it would be bad practice to have a staircase winding round a lift well where such can be avoided. In cases where such an arrangement is unavoidable the whole should be enclosed in a glazed fire-resisting screen. The enclosure may take the form of slabs 3 inches thick, but where stone steps are used in a public building the Building Acts demand enclosing walls and a solid central newel at least 9 inches thick. The length of the flight is limited to 15 steps without a break, the minimum number in a flight should be three steps, and all half space landings must be 6 inches thick at least.

Cut off lobbies should be arranged for whenever possible at the head of all staircases.

Horizontal and vertical openings connecting the various rooms of a building require to be adequately protected, since they form means whereby the flames may spread in case of fire.

Wooden doors having a minimum thickness of $1\frac{1}{2}$ inches are unsuitable for large openings, and in the case of Buildings of the Warehouse class the Buildings Act specifies that the doors be of wrought iron $\frac{1}{4}$ inch thick at least with the stiles and rails at least 4 inches wide. The frame must also be cased and incombustible, and one such door must be fixed on both sides of the openings and overlap it 3 inches all round.

There is a tendency for such doors to curl at the corners when subjected to heat, due to the unequal expansion of the metal. This takes place on the side opposite the flame leaving an opening for the latter to pass through. Such doors may be hung on hinges, and should always be provided with ample fastenings to prevent this tendency to curl. The best form of door for large openings is the automatic self-closing armoured door of such a type as that made by Messrs. Mather & Platt, consisting of selected wood and asbestos sheets glued or screwed together to which tinned steel sheeting is secured by means of screws in such a manner that the countersunk heads of the latter are hidden from view. The door is hung from the top by hangers running on a metal bar set at a slight slope, and are held open by balance weight, attached to a fusible cord fastened to the door. In case of fire the cord is burned through, the door slides forward being released of the balance weight and closes the opening. Trap doors may be fitted which automatically close, the principle being the same.

Door and window openings may be protected by automatic self-closing and revolving shutters which may be had in great variety, wood, steel, tin cased wood, etc.

The main essential of both doors and shutters is the prevention of the passage of flame from one side to the other. For this reason they should fit tightly up to the face of the wall and overlap the opening 3 inches at least. An effective method in the case of shutters is to provide metal guides at the sides, firmly secured to the wall.

Innumerable patent fire resisting doors have been invented and submitted

for testing, but very few have approached any where near the standard of protection sought by the patentees.

Window frames should whenever possible be of metal, but where the cost is prohibitive hard wood frames with good substantial bars may be used. Wired glass is extremely useful, but cannot be used in many cases on account of appearance. Its advantage lies in preventing the glass falling out after cracking, thus preventing the escape of flame and fumes, and at the same time does not allow of the ingress of air to supply the fire with the oxygen necessary for combustion. Wire embedded in glass does not in any way prevent glass from cracking, indeed many windows containing it are cracked by the heat of the sun's rays.

Skylights are usually glazed with Harley's Rough Rolled Plate, wired or otherwise, which is translucent but not transparent, but skylights over staircases and elevator shafts in particular should be glazed with ordinary window glass so as to be easily broken in case of fire, allowing of the escape of smoke and fumes. The Building Acts require the skylights over the stage of a theatre to be so glazed for the same reason.

In domestic buildings we are met at every turn with the crying demand for economy, particularly in schemes for the housing of the working classes. For materials we are confined to bricks and mortar, timber and either slates or tiles for roofing, but recently the breeze slab for partitions has come rapidly to the fore to the almost entire abolition of the old insanitary and non-fire resisting timber type. Its excellence lies not only in its fire-resisting properties; it is sanitary, soundproof almost, requires only two coats of plaster, occupies far less space being as little as 2 inches thick, but above everything cheap.

The floors may be improved to a great extent by the insertion of concrete pugging. (Fig 13.) The Building Acts require this to be 5 inches thick with the fillets at the centre, if laid wet, but where separately cast L. irons of small section may be spiked to the joist to receive the blocks which simply rest upon them. Stronger joists are necessary to take the increase in weight, but the pugging also acts as a stiffener. I have also seen suggested that asbestos sheeting may be laid before the floor boards. This is good from a fire-resisting standpoint, but is not to be recommended owing to the possibility of dry rot attacking the boards which are unventilated on the underside. (Fig. 14.)

Slates and tiles form the most suitable roof in such a case. They are incombustible, but will crack under the influence of heat. Uralite has been used, and although good in this respect has a poor appearance. There is no advantage in its use on the roof since the two former materials will prevent any external risk, whereas when the fire breaks out inside the house the result is the same in any case. Uralite may with advantage be used where quartered partitions are intended.

Steel principals are hardly likely to extend to this class of work. In themselves they are not a good form, necessitating a fire-resisting ceiling owing to the steelwork being exposed.

Staircases to Flats where of stone should in all cases be supported at both ends.

Warehouses and Factories form a distinct class of their own. The leading factor will be the nature, inflammable or otherwise, of the articles stored or to be manufactured. If reinforced concrete is not decided upon brick is the next best material for all main walls. The various floors may be divided by some form of fire-resisting partition, and here it is well to remember that the smaller the divisions the less the risk, and the less will be the insurance premium charged.

All doors should as far as possible be automatic and quick closing. Every precaution should be taken to protect all elevators, hoists, airshafts and holes in the walls and floors for the driving belts of any machinery used. Every means should be provided to check an outbreak as is described hereafter.

Similar precautions should be taken with large buildings such as offices where special attention should be paid to cut off lobbies.

The requirements for Public Buildings and Theatres have already been briefly outlined when treating with the London Buildings Acts. In the case of a Theatre the stage must be completely cut off from the Auditorium, which is accomplished by means of a curtain of asbestos cloth on a braced iron frame so arranged that it is raised and lowered, but not rolled. The raising and lowering are effected by means of a winch and balance weight's, a concussion tube being provided to absorb the shock just before the curtain reaches the stage. In addition a sprinkler installation must be fitted so that a continuous sheet of water continually passes over and down the face of the curtain. The curtain must be lowered once during each performance to ensure it being in proper working order.

Where buildings of a temporary nature have to be erected the American metal lath on frame wall construction might well be adopted. (Figs. 15 and 16.) The studs which are 4 inches by 2 inches are braced with 3 inch by 2 inch pieces at intervals. Metal lathing is attached by means of staples to the studs, back-plastered, and the front face finished with waterproofed stucco which may receive a coat of creosote or asphalt paint. The inside face has plaster on metal laths, the finished thickness of the whole is $6\frac{1}{2}$ — $6\frac{3}{4}$ inches. Such a wall has received classification as affording full protection.

The regulations respecting alternative means of escape to be provided have been mentioned in connection with the Building Acts. The Acts require that such an external staircase shall be of incombustible materials carried on dead bearings and not on brackets. Such conditions render a good staircase self-supporting so that even though the wall against which it abuts collapses it still continues to stand. An external staircase of this type is constructed throughout of cast and wrought iron, supported on cast iron columns running the whole height. The treads and rises should not exceed 8 inches, which gives a maximum angle of 45° for the slope.

The Great Fire of London furnished us with a splendid example of the risks run when buildings are closely packed in streets which are narrow. The fire offices on this account divide a City into districts in some of which the risk is greater than in others, and vary their rates accordingly. The remoteness or proximity of a dangerous trade must be considered also.

Within the building itself the chief source of danger lurks around staircases, elevators, letter lifts, etc., which form the readiest means of the spread of an outbreak of fire from floor to floor.

More fires have been traced to carelessness than any other cause. The thoughtless casting away of a lighted match or a burning cigarette end, sparks from engines and the use of naked lights have been responsible for much damage and loss of life. Spontaneous combustion is not infrequently the result of friction between the various parts of an engine, or a defect in the electric lighting installation.

In all large establishments the electric installation should be frequently and periodically overhauled. Metal tubing with purpose made jointing and draw boxes for repairs, should be used. Wooden casing is absolutely inadmissible on any

account, since if the copper wire be overcharged with electrical current the excess of electrical energy appears as heat energy with consequent danger of setting fire to the wood after destroying the insulating material which surrounds the wires.

Too much reliance should not be placed on the Local Fire Brigade in the case of large warehouses and factories employing many hands. Special emphasis was laid on the adequate training of private brigades particularly at such places as Cotton Mills by the Budapest Fire Service Congress which met in 1904. This important, in fact primary point, cannot be too strongly urged. The best equipment for dealing with an outbreak is worse than useless if there is nobody there who understands how to use it; one or two may know, but they cannot be in all places at once. Everyone permanently connected with the works or establishment should have a working knowledge of all apparatus at least. Weekly fire drills *at least* should be made compulsory and rigidly adhered to, if more frequent, better still.

The means of extinguishing a fire are divisible into two classes; those which require periodic attention and those which are automatic in action.

The most primitive form is the bucket filled with water which would be sufficient probably to extinguish the greatest of fires provided it were used in time. In some cases such as where inflammable liquids are stored the water is replaced by sand. Water has a quenching effect and the steam evolved will not support combustion. The buckets should be placed in conspicuous places where their contents can be readily seen as the water will evaporate in time; covers have been used to prevent this, but it is better to have the contents changed at stated intervals.

Portable extinguishers consist of metal vessels of various shape and design which contain carbonate of soda solution and sulphuric acid, the latter being enclosed in a glass vessel. Mostly by simply inverting the extinguisher this vessel is broken allowing the acid to mix with the carbonate of soda solution. The nozzle of the extinguisher should be immediately directed towards the burning material as a violent chemical action is set up and a jet of spray shoots out which gives off carbon-dioxide, a non-supporter of combustion. There are many forms on the market under various patents, the Minimax and Era being amongst the best known of these.

Powder extinguishers giving off gases which will not support combustion may be had, but they are not very efficient.

Hand pumps with a hose attachment are sometimes used, but their efficiency is limited as little force is developed by manual effort, and the jet thrown is therefore not very powerful.

Hydrants having valves at each floor level which may be either single or double headed are fixed at the head of all staircases at a height of 3 feet above floor level in all our latest large hotels and stores. These are the height of efficiency from the point of view of extinction. A length of hose, or probably several lengths, with nozzles, etc., are kept in a glass fronted cupboard placed in a conspicuous position close by. The hydrants are fed from the street mains, and the lengths of hose allow of the outbreak being tackled, no matter where it occurs.

Automatic sprinklers are set in motion by the fire itself, which thus provides the means of its own extinction. They consist of a sprinkler head sealed with a fusible alloy having a very low melting point—180°—190°F., which is well below the boiling point of water. The escaping water is caused to impinge on a shaped plate of metal, and is distributed over 100 superficial feet of the ceiling area in

the form of a spray. This prevents the ceiling catching fire, whilst the fire itself is quenched by the falling water. The supply pipes are run in the ceiling itself and do not show, the heads of the sprinklers protruding about 12 inches. The arrangement is such that immediately there is any motion of water in the supply pipe caused by the opening of a sprinkler head an alarm gong is set in motion which continues to ring as long as the water flows. This serves the double purpose of giving warning in case of either fire or accidental damage to any part of the system.

Automatic alarms, apart from that just described, may take the form of detectors controlled by either automatic or mercurial thermostats. The expansion of the mercury in the latter makes contact between two poles completing an electric circuit, causing a red lamp, or other danger signal, to light on the indicator board. The detectors are fixed in all principal rooms and near all stair heads.

A means of protection principally from external risks, such as flying sparks from a neighbouring building which is on fire, which is manually operated, is the Drencher system. This consists of a series of perforated sparge pipes fitted to the tops of windows, principally the two top storeys, then alternate storeys, with the exception of ground floor and basement. When in operation a continuous sheet of water passes down the outside of the windows. Drenchers are most useful in the case of roofs since the fall of a floor in a neighbouring building may cause not only a huge shower or sparks, but light burning matter to be thrown high in the air alighting still in a burning condition on the surrounding roofs.

Some of the above will be found in all buildings where there is a likelihood of fire accidentally breaking out and rapidly getting out of control, whilst in a well equipped establishment the whole may be installed. It will clearly be seen then, that the question of fire extinction is by no means the insignificant matter as would appear at first sight.

For the root of the matter we must, however, look further afield, for it commences with the laying out of the water scheme of the town or district. The pressure in the mains must be such as to throw a jet of water over the highest building, either erected or anticipated.

As an additional precaution hydrants for the use of the Fire Brigade may be let into the pavement outside, whilst in many important buildings large storage tanks holding many thousands of gallons of water are provided in the basement, with sometimes a second storage tank on the roof supplied through a bye-pass valve, and used in case of emergency or during repairs to the main storage tank. Such arrangements, of course, necessitate engine rooms and pumping machinery being provided on the premises.

Another form of risk applying principally to isolated buildings, and those with prominent architectural features, such as towers and spires, is that of damage and fire following a stroke of lightning. This is caused by the air, which is a bad conductor, becoming overcharged with electricity. The lightning flash, which is the result, always takes the line of least resistance. The air is a bad conductor of electricity, brick, stone and wood are better, whilst metals are best of all; copper, for instance, offering practically no resistance at all. It is for this reason that lightning conductors are made of this material; they need rarely exceed a tape 1 inch by $\frac{1}{4}$ inch in section. The air terminal should project about three feet above the highest point, but in the case of several prominent features, such as, for instance, a tower with pinnacles at the corners a terminal may be required for each. In such cases, when circumstances allow, all the air terminals may

be collected and connected to a single earth terminal. This should be taken down at least 5 feet and connected to a copper base plate 3 feet square; there is no advantage in having the latter thick, 1/16 inch is ample. Where a water main is handy, and there are no gas mains in the vicinity the earth terminal may be connected to the water main.

The success of any arrangement of conductors depends upon the proximity or otherwise of other metals in the shape of spouting, fallpipes, etc., outside the building, and isolated metal fittings, etc., inside the building. All the outside metal within 5 feet of the conductor should be connected to it to prevent sparking whilst no inside metal parts should be within 3 feet of it.

To summarise, in conclusion, we find that from a fire-resisting standpoint our range of useful materials is limited and governed by the effects of high temperatures upon their physical nature and chemical composition; that in the planning and arrangement of any proposed building the vulnerable spot about which interest should be principally focussed is the staircase; that the leading principle in fire extinction is the thorough understanding of the appliances by all concerned, that each be clearly marked and placed in an easily accessible position, and that the motto to be aimed at in the latter instance shall be in the words of the old English proverb, 'A Stitch in time saves nine.'

Proceedings of the Society.

An Ordinary Meeting of The Society of Architects was held at 28, Bedford Square, W.C.1, on Thursday, December 15th, 1921, at 6 p.m. The President, Sir Charles T. Ruthen, having taken the Chair, the minutes of the previous meeting, as published in the *Journal*, were taken as read, and were confirmed and signed.

The following announcements were made:—Nominations: For Fellowship, 3; for Membership, 5.

ADMISSIONS:—

AS LICENTIATES:—SIMMONDS, JAMES RALPH, Architectural Department, City Hall, Cardiff.

AS STUDENTS:—VANSTONE, LIONEL FREDERICK, 5, Hillsborough, Mannamead, Plymouth; VICKERMAN, CECIL GEORGE, 106, Dewhurst Road, Fartown, Huddersfield.

RESIGNATIONS ACCEPTED:—J. A. DARTNALL, Member of Leytonstone; R. H. CLEGG, Member of London; D. G. ROWLAND, Licentiate of Southend.

ELECTIONS:—The following Candidates, whose nominations had been previously announced and published, were submitted for election under Articles 12 and 17 of the Articles of Association, and were declared to be duly elected:—

FELLOW:—YORKE, FRANCIS WALTER BAGNALL, Queen's College, Paradise Street, Birmingham.

FELLOW TRANSFERRED FROM MEMBERSHIP:—BASSETT-SMITH, WALTER BASSETT, 651, Avenida de Mayo, Buenos Aires.

MEMBERS:—ALLISON, WILSON BURDETT, 21, Trinity Road, Wallasey, Cheshire; FEARN, STANLEY WALTER, F.N.Z.I.A., 156, Willis Street, Wellington, N.Z.; KAY, JAMES SANDFORD, 17, Finlay Street, Fulham, S.W.6; MASON, HAROLD CLAYFORTH, A.R.I.B.A., P.W.D., Baghdad; SARGENT, FREDERICK LIONEL, 44, Corn Street, Bristol; WOOD, ERNEST WILLIAM, 62, Market Street, Manchester.

The proceedings then terminated.

Notes from the Minutes.

ANNUAL DINNER.—The Annual Dinner will take place at the Prince's Restaurant, Piccadilly, on Wednesday, February 22nd, 1922. It will be open to members and visitors including ladies, and the tickets will be 12/6d. each exclusive of wines, etc.

ASSISTANT SECRETARY.—Mr. C. A. Barman of London has been appointed Assistant Secretary of the Society. Mr. Barman was a student of the Liverpool University School of Architecture and since then has gained experience as assistant to several leading London architects, his last engagement being with Sir Edwin Lutyens, R.A., Mr. Barman has also pursued some of the other arts connected with Architecture including Journalism, and possesses other requisite qualifications for the position which he now holds.

ART AND LITERATURE COMMITTEE.—Mr. Percy B. Tubbs has been re-appointed Chairman of this Committee. The Committee invites the co-operation of members in reviewing books and will welcome donations of new or second-hand books to the Library and contributions to the Library Fund. The re-cataloguing of the Library has been completed and the question of the issue of a revised catalogue is in hand.

EXAMINATION COMMITTEE.—Mr. L. Sylvester Sullivan has been re-appointed Chairman and Mr. Howard M. Robertson Vice-Chairman of this Committee.

The examiners reports on the two membership examinations held in April and October, 1921, under the new conditions show that out of thirty candidates who completed the test, ten satisfied the examiners. Three Candidates gained certificates of Merit, and two certificates of Honour, one of the holders of which latter received also a special award of twenty-five guineas as the best candidate of the year.

The conditions relating to the Society's design and other competitions are under revision.

PRACTICE COMMITTEE.—Mr. Thomas Wallis has been appointed Chairman and Major C. F. Skipper Vice-Chairman of this Committee.

The report of the Scale of Charges Sub-Committee on their meeting of November 30th with representatives of the R.I.B.A. was received. Certain points raised by the Society relating principally to bringing similar scales of other professional bodies and Government departments into line with the architects' scale have been discussed but it has not been thought desirable to amend the scale at present.

The question of housing fees being a separate matter has not been discussed in this connection.

An invitation from the R.I.B.A. to appoint representatives to confer on the subject of the Regulations of Architectural Competitions was accepted and Messrs. Thomas Wallis, H. M. Robertson and the Secretary, C. McArthur Butler were appointed to attend the conference.

The action of the Secretary in barring the Tottenham War Memorial Competition to members, pending an endeavour to obtain amendments to the conditions, was confirmed.

FINANCE COMMITTEE.—Mr. George H. Paine has been appointed Chairman of this Committee.

The Auditors' Report on the Finances for the year ended October 31st, 1921, was received. It showed that the budget prepared by the Secretary early in the year had been justified in every particular and that the actual figures coincided very closely with those estimated.

The Auditors' Report is to be submitted to the members at the Annual General Meeting on January 12th, 1922.

UNIFICATION AND REGISTRATION.—A report was received from the Hon. Secretary of the Unification Committee, dated November 17th, outlining the course of events since the last official reports had been published. It appeared from the present report that there was a possibility of the resumption of negotiations between the Conditions of Membership Committee and representatives of the Society in the near future.

BUILDING TRADES PARLIAMENT.—Arising out of the report of the November Quarterly Meeting of the Industrial Council and the report of certain delegates of the Society who had been in conference with representatives of the Industrial Council on the subject, it was decided to reduce the representation of the Society from four delegates to one, as from June, 1922.

NATIONAL BUILDING CODE.—From the report of the Society's delegates present at the conference on November 21st, it appeared that certain resolutions of the conference had now been accepted by all the constituent bodies and that the President of the Society, Sir Charles T. Ruthen, had been appointed to represent the Society in carrying the proposals further by approaching the Government on certain aspects of the case.

ANNUAL GENERAL MEETING.—It was decided to hold the Annual General Meeting of the Society on January 12th, 1922, at 8 p.m. to receive the Councils Annual Report and the Auditors' Statement of Accounts; the meeting to be followed by a discussion to be opened by the President, Sir Charles T. Ruthen, on the question of "The Cost of Building" with the object of giving members of the Society an opportunity of expressing their views on the subject.

R.S.I. CONGRESS, BOURNEMOUTH, 1922.—It was decided to accept the invitation to appoint representatives to the Congress next July one of whom should be the Society's Local Honorary Secretary, Mr. Harry E. Hawker, of Bournemouth.

BUILDING TRADES EXHIBITION, 1922.—It was decided to co-operate with the arrangements for the Architects' Welcome Club at Olympia during the Building Exhibition in April, 1922.

Annual General Meeting.

The Annual General Meeting of The Society of Architects will be held at 28, Bedford Square, London, W.C.1, on Thursday, January 12th, 1922, at 8 p.m., to receive the Annual Report of the Council and the Auditors' Report and Balance Sheet.

At the conclusion of the business meeting the President, Sir Charles T. Ruthen, O.B.E., will open a discussion on the cost of building.

Current Competition Conditions.

The Society has filed for record the conditions of the following current Competitions: AUCKLAND (N.Z.); "DAILY MAIL" (Labour-saving House); *ILFORD (War Memorial); KIRKCALDY (War Memorial); *TOTTENHAM (War Memorial).

* Barred to Members of the Society.

Discoveries at Glastonbury Abbey.

On February 16th, 1921, at an ordinary meeting of The Society of Architects, 28, Bedford Square, Mr. Bligh Bond, F.R.I.B.A. (of Bristol), delivered an illustrated lantern lecture on "Discoveries Made During the Recent Excavations at Glastonbury Abbey."

Mr. Bond said that Glastonbury and its associations were dear to the hearts of all English men and women for many reasons, but chiefly from the great antiquity of its history. It was undoubtedly the earliest Christian foundation in these islands, and it was traditionally said to have been missioned by Joseph of Arimathea. It was also undoubtedly the stronghold of the Druidical faith, and it was a place of natural security; a sort of island fortress where the inhabitants could live unmolested.

THE OLD TIMBER CHURCH.

Tradition had it that when Joseph came to Glastonbury his followers founded the old timber church which existed there, and that old church was said to have been kept going in one way or another by means of restoration for 1,000 years. First the Saxons kept it going, followed by the Normans, who carefully preserved it until A.D. 1184, when it was said to have been burned down with all the other buildings in a great fire which occurred in that year. A Romanesque chapel was built within a few years of the fire, parts of which still remain. Certain old records stated that the new chapel was built exactly on the site of the old wooden church, and was of exactly the same proportions. It was certainly a unique specimen of the work of that period, and there were certain details in it which were Burgundian French, which were very refined. There was a crypt which it was believed was excavated in the sixteenth century, and remains of the old fresco work were still to be seen.

In the north-east turret they got into another period. That was in a terribly ruined state; but it had been partially rebuilt by the trustees. To pass on to the great Abbey Church, the windows of Glastonbury were all very wide, and he (the lecturer) judged that as time went on and the glass that was used became much more delicate and fragile so that it could not resist the wind pressure, the builders took to dividing the very wide lights with tracery, which gave a better resistance for the narrower panes. The Great Abbey Church began building about the same time as St. Mary's Chapel, and it went on building under successive Abbots; but after the dissolution it was dismantled and allowed to fall into decay. It became a prey to the landlords, who disposed of the stone, and even in the time of George I. and George II. it was well-nigh gone. Up to 1912, in the course of their excavations, they had discovered a very interesting Dunstan Chapel. It was a thirteenth century chapel on the higher foundation, but there was a very much older foundation below, which he believed belonged to the ninth century.

When excavating the ruins as they stood to-day he came across what appeared to be an angle of a very much older church, and it looked as if the new church when it was built was just built round the site of the old one. It was impossible to say what that church was, and he could not be quite sure about the plan. Right up at the east end they found several fragments of very beautiful work executed in blue lias stone. At the same place he dug up a little leaden token which was no doubt the seal to a Papal "Bull."

With regard to the design of Glastonbury, there was something very satisfying about it—it was all beautifully proportioned and was worked out in multiples of

five. Having shown the one remaining transept of the chapel, Mr. Bond said that on the east alley of the cloisters they found the step of the Chapter House, and nearly opposite the opening to the Chapter House was a little foundation between two of the buttresses, which was doubtless the foundation of the house of the man who took tally of the monks as they came along.

THE EDGAR CHAPEL.

At the beginning of the nineteenth century John Britton published a plan of the abbey, but there was nothing at the east end to guide antiquarians as to what might have been there. They had nothing but that plan and Leland's record to guide them as to what was the shape of the east end. There was a great diversity of opinion among antiquarians on the subject. Professor Willis satisfied himself that the original form of the east end was five chapels in a row, and from the record of Leland he thought that a chapel which had taken two abbots to complete it was rather an important one, and therefore he considered that the Edgar Chapel was there, and he gave it a projection of about 12 ft. Other antiquaries, however, did not agree with Willis, but said that they thought the Edgar Chapel was in another place. In 1904 the Archaeological Institute thought they would settle the question, and they got permission from the then owner to excavate, and Sir W. Hope—Mr. Hope as he then was—cut a trench outside the wall, but found nothing in it. He then cut a trench down centrally, when he thought he had come upon the foundation of a wall, but for once he made a mistake—his negative evidence of the trench led him astray because he concluded that as there was no wall there never had been one. The question remained in that curious and unsettled state until, at last, in 1908 he (Mr. Bond) was able to excavate for himself. He had interested a friend in the matter, and at the end of 1907 they found themselves in possession of practically all the data that the other antiquaries had got. They got a large variety of contradictory theories; but, personally, he inclined to Professor Willis's theory, although he thought there was a good deal to be said on the other side.

A MASSIVE WALL.

Shortly after they commenced digging they found two trenches, and continuing they came upon a massive wall about 5 ft. wide which, on examination, turned out to be 32 ft. long. It was not very far below the ground, and evidently Mr. Hope, when he dug his trench, only missed it by just about 2 ft. They were evidently digging out part of the chapel, and in December, 1908, when he made his report to the Somerset Archaeological Society, he took courage to say that he believed that 90 ft. was the proper length of the chapel.

In their excavations they found some very interesting relics of the Edgar Chapel—quite enough to make a very valuable study. Unfortunately they had been put away and were not open to public inspection. He had asked the trustees to be allowed to classify the relics and put them on view, possibly at a small charge, but he regretted to say he had not been able to move the trustees in the matter. Some of those relics included remains of the great boss from the vaulting, which were very beautiful. In 1910 he got the refectory and the Chapter House, the Dunstan Chapel, and another chapel which was not marked on the plan. They found the Loretto Chapel 31½ ft. away from the north side of the nave; 40 ft. long and 20 ft. wide. There was nothing left now but the bare foundations. He hoped that some day they might be fortunate enough to dig up a few fragments of the edifice.

Concluding, Mr. Bond said they were very anxious indeed to go on with the excavations. They were working for many years up to the war, and then they stopped for a time. They had resumed work the last two summer seasons. They were hampered very much by want of funds, and they did not always find it easy to move the authorities—they were very slow in coming to decisions, and all the time there was so much chance to go ahead. He would like to see increased interest on the part of his brother architects and antiquaries in Glastonbury, because he believed there was a great deal yet to be found there. They had not half exhausted the site, which was a veritable mine of wealth. Glastonbury must have been one of the most glorious of the Benedictine houses, second only in importance to Westminster. Such fragments as they had succeeded in digging up had been very choice indeed, and of unique merit, and in the interests of archaeology he trusted that much more work would be carried out on the site.—*The Architect's Journal*.

General Housing Memorandum, No. 58.

Fees Payable to Quantity Surveyors in Private Practice for the Preparation of Bills of Quantities in Connection with State-Aided Housing Schemes.

The terms set out in this memorandum have been settled in agreement with representatives of the Surveyors' Institution and of the Quantity Surveyors' Association, and were confirmed at a special meeting of quantity surveying members of the Institution and of members of the Association.

I.—METHOD OF CALCULATING FEES.

(a) For the purpose of calculating fees payable under General Housing Memoranda 4 or 31 or under Part II. of this Memorandum the whole scheme of the Local Authority should be taken as the unit (except in cases of the conversion of existing buildings into flats or the erection of block tenements of more than two storeys, when the works, so far as they are on separate sites, will be considered as separate schemes).

(b) Where Bills of Quantities have been prepared by more than one Surveyor for houses included in a Local Authority's Scheme, the total fees payable for all the bills prepared by all the Surveyors engaged will be pooled and apportioned *pro rata* between the Surveyors. If the amount so apportioned to any Surveyor falls short of the minimum fee described in the next paragraph, an extra payment in excess of the general fees payable under General Housing Memoranda 4 or 31 will be made to bring the apportioned fee up to the minimum for that Surveyor.

(c) The minimum fee referred to in the preceding paragraph will be calculated on the following basis:—

(i) A fee of $2\frac{1}{2}$ per cent. on the first £5,000 and 2 per cent. thereafter will be assessed on the cost of the houses included in one block of each separate design for which separate and distinct bills have necessarily been prepared by the Surveyor in question. Such ordinary variations as are necessary to avoid monotony of appearance or mere change of aspect of ladders or the like will not for this purpose be regarded as separate designs.

(ii) To this fee will be added a further amount of $\frac{1}{4}$ th per cent. on the cost of the remainder of the houses for which the Bills under (i) have been prepared, provided that all such houses have been included in the approved lay-out of the section of the scheme allotted to the Surveyor in question.

II.—ABANDONED OR CURTAILED SCHEMES.

(a) The fees payable under General Housing Memoranda 4 or 31 respectively in respect of quantities prepared in cases in which the houses are not erected or are reduced in number, have been the subject of discussion between the Minister and the representative associations of the profession. As a result of considerable negotiation it has been agreed after full consideration of all points of view that a payment in respect of the abandoned houses of one-half of the fees which would have been payable if the houses had been erected from these quantities would be a fair and equitable settlement of the question both in the public interest and in the interests of the members of the surveying profession.

(b) The cost per house for the purpose of determining the fees payable as above should be determined as follows:—

Where contracts have already been let for houses on the same site, the contract price for those houses shall be deemed also to be the contract price for houses of similar types which are abandoned in respect of that site, subject to the following maxima (any excess over the maxima to be ignored):—

Non-parlour type with 2 bedrooms	...	...	...	£750
Non-parlour type with 3 bedrooms	...	...	...	£850
Parlour type, 3 bedrooms	...	...	...	£950
Parlour type, 4 bedrooms	...	...	...	£1,050

Where no tenders have been accepted for houses on the site, the contract price shall be deemed to be the average price (subject to the maxima referred to in the preceding paragraph) at which contracts were approved by the Minister during the month in which the quantities were prepared (as shown by the date of the quantities). This figure will be supplied by the Ministry on application in such cases.

(c) The above arrangements will apply to all houses included in the approved lay-outs or sections thereof so far as complete bills have been prepared on the instructions of the Local Authority from approved plans and specifications.

(d) In the event of further houses being erected from these bills of quantities at a later date, the balance of the fees payable shall be the difference between the fees on the tenders then accepted and the amount already paid for those houses.

III.—GENERAL.

It is understood that owing to the doubts which have existed in the minds of Local Authorities as to the application of the provisions of General Housing Memoranda Nos. 4 and 31 payments to Surveyors have in some cases been delayed.

In view of the further information contained in this Memorandum, Local Authorities will be able to make prompt settlement or substantial payments on account in respect of the amounts payable to their Quantity Surveyors for the preparation of Bills of Quantities.

MINISTRY OF HEALTH,
WHITEHALL, S.W.

23rd November, 1921.

The Society of Architects.

Sessional Arrangements, 1922.

Subject to additions and revisions of which notice will be given in the Journal.

Jan. 5	Practice Committee 3.30 p.m.	May 11	Council 4 p.m.—Ordinary Meeting.*
„ 11	Masonic Lodge 4 p.m.		
„ 12	Council 4 p.m. Annual General Meeting 8 p.m.		
Feb. 2	Practice Committee 3.30 p.m.	June 3	Victory Scholarship Competition, Part I.
„ 8	R. A. Chapter 5 p.m.	„ 5	Whit Sunday.
„ 9	Council 4 p.m.—Ordinary Meeting.*	„ 6	Bank Holiday.
„ 22	Annual Dinner.	„ 8	Practice Committee 3.30 p.m.
		„ 15	Council 4 p.m.—Ordinary Meeting.*
		„ 24	Midsummer Day.
Mar. 1	Entries close for April Membership Examination.	July 1	Victory Scholarship Competition, Part II.
„ 8	Masonic Lodge 4 p.m.		
„ 9	Practice Committee 3.30 p.m.		
„ 16	Council 4 p.m.—Ordinary Meeting.*	Sept. 1	Entries close for October Membership Examination.
„ 22	Membership Examination opens.	„ 7	Council Meeting 3 p.m.
		„ 22	Membership Examination opens.
Apl. 6	Practice Committee 3.30 p.m.	„ 29	Michaelmas Day.
„ 11	Building Exhibition, Olympia, opens.	„ 30	Last day for delivering Nominations for Council.
„ 13	Council 4 p.m.—Ordinary Meeting.*		
„ 14	Good Friday.		
„ 16	Easter Day.	Oct. 5	Practice Committee 3.30 p.m.
„ 17	Bank Holiday.	„ 9	Last date for delivering Ballot Papers for Council Election.
„ 27	Building Exhibition closes.	„ 12	Council 4 p.m.—Special General Meeting 8 p.m. Election of Council for 1922-23.
May 1	Entries close for "Victory Scholarship" Competition.	„ 31	End of Session.
„ 3	Membership Examination closes.		
„ 4	Practice Committee 3.30 p.m.		
„ 10	Masonic Lodge 4 p.m.	Nov. 3	Membership Examination closes.

* The time and other details of the Ordinary Meetings will be announced in the Journal.

THE
Journal
OF
The Society of Architects.

FOUNDED 1884. INCORPORATED 1893.

Including Transactions and Architectural Notes.

No. 4. Vol XV.

FEBRUARY, 1922.

New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.

The Journal.

The *Journal* is intended not merely to record the proceedings of the Society, but to afford to the members a medium whereby they may keep in touch with each other and with the Society, interchange their views and add to the general sum of knowledge in regard to matters of professional interest. It would be to the advantage of all concerned if the members would avail themselves more fully of the opportunities thus provided for them, and send communications, notes, queries, correspondence and suggestions to the Editor with a view of making the *Journal* of greater value to those in whose interests it is conducted. Criticism is more helpful when it is of a constructive rather than of a destructive nature, and it is easier to destroy than to create. Sustained co-operative effort is what is required to accomplish the end in view, and the Editor invokes the friendly aid of the members in this direction.

Victory Scholarship Fund.

Two members of the Society, who have already subscribed generously to this fund, are anxious to stimulate further interest in it, and have offered to contribute a donation of £35 on condition that at least 75 per cent. of the members of the Society who have as yet not subscribed to the fund will each contribute a sum of not less than five shillings within the next two months.

The total sum required is £2,000, towards which £734 has so far been subscribed. It should be noted that donations are not limited to members of the Society, and that some of the largest individual sums have been received from friends outside the Society, and that the list contains the names of several ladies.

Members may therefore with propriety interest others who may like to take some share in this branch of the Society's activities.

The Architect and the State.

*By SIR CHARLES T. RUTHEN, O.B.E., PRESIDENT OF THE SOCIETY OF ARCHITECTS,
JANUARY 12TH, 1922.

The President, Sir CHARLES T. RUTHEN, in introducing his subject, said it was not always a very popular or very nice position to occupy to have to take what he called perhaps an unpopular course. It was very easy indeed to take the popular course, to travel along the road that everyone else had always travelled along, to take good care to get round the obstacles, to miss all the rocks, and jump over or get round all the pitfalls; but he did not know whether that was altogether satisfactory. He was sure in the architectural profession that was not satisfactory, always assuming that he was right in suggesting that there were difficulties, pitfalls, and obstacles. Of course there might be members of the profession who might entirely disagree with him. He should be very pleased to know that they existed and should be very pleased if they disagreed with him, but what he objected to very strongly, and so would everyone else if they thought a moment, was anybody sitting down and whispering to someone else what ought to be done. This ought to be done and that ought to be done, but no one did anything. He had heard it over and over again. He thought the architectural profession was a united and concerted body—well, he wanted to be as kind as possible—but it did not seem to do very much, it seemed to rely on its glorious past. Some people lived very well upon the glorious past and a large number did not. They had not the glorious past of the art to practice to-day, and there did not seem to be much of a move to supply what part of the art was glorious or otherwise, to the needs of the present day. He had set down a few notes, and he believed they were pretty strong. He intended that they should be strong, and would have made them stronger if he could, but he had done his best. He should like anyone who objected to them to say so. He really thought a good riot would do good in the architectural profession, but he did not want them to do it there, because the Society had just had the place re-decorated, but he thought he should like to see some brick flinging, half bricks or whole bricks. There were plenty of bricks about. One Government Department, he believed, had about five hundred million. Well, that would cause a good old riot in the architectural profession. But really, what he should like was something to startle the profession and therefore he had put down the few words which he would read to them.

During the past few years I have been driven to the consideration of the subject of the position occupied by architects and architecture in the social system of to-day.

Circumstances following rapidly one upon another, during the exceptionally strenuous and exciting years immediately following the signing of the Armistice, have caused one to wonder whether the architect of the twentieth century is much if anything ahead of his brother of a century ago. Whether or not in the

* At a Special Meeting of the Council of The Society of Architects held on January 18, 1922, a resolution was carried unanimously that they dissociate themselves from the views expressed by Sir Charles T. Ruthen, President of the Society, in his paper on "The Architect and the State," particularly as to the responsibility of the Architectural profession for the failure of the National Housing Scheme, and from the implications as to profiteering by Architects in connection therewith.

advance of civilisation, of science, of commerce; in the progress generally of all that contributes to modern life; the architect and his craft have progressed shoulder to shoulder with other things.

Those within the profession who take the slightest interest in matters outside their immediate practice, and it is doubtful if the percentage of such, in this connection, is lower in any other profession or walk in life; have heard much of late regarding proposals for the unification of the ranks of the profession, and the statutory registration of those practising architecture.

It is further well known to that small group within the profession, that much of recent years has been heard of what are considered to be the proper modes and methods of providing efficient architectural education.

The ordinary ranks of the profession take just a passing notice, if even that, of this effort or that effort designed to prevent the practising of the inefficient or unqualified, having for its object the education of the coming generation of architects, or any movement affecting the ranks of the profession throughout the Empire.

The general public know nothing of these momentous discussions, carried on energetically and almost continuously by a mere handful of professional enthusiasts, and have little knowledge of the real value of the architect and his craft to modern progress and civilisation.

Some, but comparatively few, understand the architect and value his work. Many others look upon the architect as a kind of necessary and expensive evil, mainly useful in connection with building matters, in avoiding difficulties in relation to regulations and by-laws; but generally a costly luxury to be avoided whenever possible. Still many more possess the haziest idea about the architect and his work, and are disposed to consider, in any event, that he may be useful to the few but is much better done without by the masses.

One wonders whether there can be a shadow of doubt as to the value that the architect and his craft should have been, in the prosecution of the great world war whether architects themselves consider that their valuable training and experience were utilised in the fullest manner, and to the benefit of the State and the people; in that great emergency. Was there in the mind of any Statesman at the head of affairs in the tragic days towards the close of 1914 and during 1915, any full and complete knowledge of the great trained but dormant machine ready at hand, in the ranks of this great profession. If not, at whose door lay the blame for this lack of knowledge. Is it possible that architects themselves still continue to live in a fool's paradise, and are content to cast the blame upon other shoulders?

In pondering over these matters one again wonders whether the architect of this enlightened century has really grasped his full responsibilities, and still again to wonder whether he has yet the slightest appreciation of the great part planned out for him and his art in modern civilisation.

In turning these vital matters over and over in one's mind, the fact is very surely borne in upon one, that the great public who, unconsciously and in a matter-of-fact way, avail themselves every hour of the day and every hour of the night, of the product, good, bad or indifferent, of the great craft of building; have not the faintest idea of the important part played by the members of the architectural profession in the every day life of the people.

One wonders whether the architect attaches to himself any share of the blame for this fatal and disastrous ignorance upon the part of the people, or whether he sometimes stops to think, and perchance realises that this lack of understanding,

is after all due, if not entirely in a large measure, to the strange backwardness, perhaps one would be more correct to say selfishness, upon the part of the entire profession.

A backwardness or selfishness which is having a very baneful effect upon the fortunes of this great and honourable craft.

Better that the architect adopted the practice—often termed pernicious, but very consistently condemned in our country—extensively and even successfully practised on the other side of the Atlantic—of advertising his wares and his services, in the manner popular with any great drapery store or furniture emporium.

Architects must not advertise, they must not offer their services; this would be a gross breach of professional etiquette; they must remain silent and trust to some piece of good fortune; to the winning of some competition; to the favour of some important or wealthy client to bring them publicity or perchance fame.

That the advertising of one's wares like some vendor of ordinary or extraordinary soap, or hair restorer, is repugnant and offensive to the sensitive feelings of the architect, brooks no argument; but to lie low and hide the gifts of the Creator under a bushel and to refuse or neglect to let the public learn of the value to modern life of good architecture; is a crime. It is wrong to architecture as an art, wrong to architecture as a science, and wrong to the public whom the architect should serve.

The present stand of architects is perhaps agreeable to the few, shall I say even satisfactory to the few. At the top of the professional ladder there is much room, but the lower the rungs the greater the crowd, and the more congested and cramped the accommodation.

To the many the present practice is mere false pride, backed by generations of narrow outlook, and love for the profession which forgets its service to the people.

An architectural debating society—one has never heard of such a society, but perhaps the idea is worth cultivating—looking for a fit subject for debate, might adopt one of the following rather amusing titles, which would, I feel sure, provide much food for consideration and debate.

- A. "What is advertising as applied to architects and their work."
- B. "Is advertising, that for which payment is made in cash at ordinary advertisement rates."
- C. "Is advertising not advertising, if no payment is made for insertion, and when the matter appears in that part of the journal usually read by the greatest number of readers."

One may object "to advertise" oneself or one's own work, in the sense of paying so much per line in the advertisement columns of a newspaper or periodical; but one may not object "to being advertised," or to being written about or of, in the ordinary news columns of a newspaper or periodical. This is cheaper, and incidentally more efficacious, but it is nevertheless advertising.

It will be generally agreed by those who observe even casually, that those highest up the ladder of fame, get the most publicity—sometimes called advertisement, and rightly so—and that free, and the lowest upon the ladder, the least publicity and very possibly have to pay directly or indirectly for that which they get.

But this is a wide and difficult technical argument and is likely to carry me away from my main topic. Nevertheless, those who are ultra-prudish and sticklers for high professional conduct might do well to consider this subject. I can safely advance this consideration for I am guilty, but not to blame.

To withhold from the great masses of the people information expressive of the value of good architecture, is not sound common sense. The greater the appreciation by the masses of good architecture, the better for the people, the world and architecture.

Architecture is not an insignificant craft, it is not valuable or useful only to a few, it is necessary and essential to the full life of the nation, and should not be kept in the background.

It is only a lower rate, trade or business that fails to bear the full glare of the sunlight.

Architects may have roamed through the catacombs of human activity for centuries, may have been afraid of injuring the majesty of the art of architecture by coming into the light, or of injuring the susceptibilities of those practising the art; but centuries ago architecture was considered a sublime art applicable only to the great monuments of the civilisation of the ages. To-day it must be realised that although the art is all that was claimed for it in the ages gone by, it is more the art of the people who are the living monuments of modern civilisation.

A few men of the profession gathered together, mixed with a sprinkling of eminent men of other professions, listen attentively to an address delivered by an acknowledged leader of the profession, and one eminent in the practice of architecture. The greatness of architecture is spoken of for the thousandth time, its glorious history is traced with pride, and generally the high importance of the craft in past ages is spoken of with bated breath. The subject of the high honour of the art and its ancient reputation is worn threadbare; but no effort is made to apply the teachings of the art to everyday ordinary life. The application of the art in its simplest form to the needs of the million is overlooked in the glorification of the higher forms of the art in the sublimest sense.

We have not come to the end of the history of architecture, no more than we have come to the end of history. We may have come to the end of a long chapter in the history of architecture, or we may be reaching that point; but there are other important chapters to follow. We cannot, and should not, expect to live on the past reputation of our art. The greatness of its past should not prevent it from having a great present and a great future.

Do the representative bodies of the architectural profession, to-day, stand for the architecture necessary for the social and industrial well-being of the people, or do they stand for that civil architecture which is the art of designing and constructing palaces, houses, churches and other edifices for the purposes of civil life, and in a more limited and appropriate sense, restricted to such edifices as display, symmetrical disposition and fitting proportion of their party, and are adorned by pillars, entablatures, arches and other contrivances for their embellishment.

Is this in the true sense the architecture of the architects of to-day, and, if so, is the architect giving to the State in these utilitarian and essentially commercial days the services which the State has a right to demand. In other words, is the architect adapting his art to the needs and requirements of the present time.

Let us examine dispassionately, so far as the limited time at our disposal permits, the bearing of these pointed comments upon matters architecturally to-day, and their application to the events of the past few years. Let us consider whether we have failed to apply the lessons taught during the period just coming to an end. Shall we attempt to benefit by our mistakes in the past and remove the causes, or shall we allow the lessons of the great world-upheaval to pass unnoticed, and allow the profession to recede into the rut from which quite recently it has been forcibly ejected.

Let us attempt to put behind us all preconceived ideas and notions of what is proper or improper from the points of view of etiquette or professional pride, and let us endeavour to apply to the necessities of the age in which we live a consideration of the value of the real science of building and architecture, so far as the latter term is applicable to the requirements of the people and the State; in regard to healthy and happy existence, and apart altogether from the art of the craft in the artistic or æsthetic sense.

Architecture, it will be generally agreed, is a very wide and comprehensive term, and although there are thousands in this country who, owing to some reason best known to themselves, do not avail themselves of the services of the architect, it is yet passing strange that all the defects in all the buildings that are erected are ingeniously placed at the door of the architect. The architect can well be done without if the work executed without his aid should prove satisfactory, but all faults in completed buildings are accounted as evidence of the incompetency of the profession.

I have set out to address these words to my own Society in the hope that I may startle the members of the profession into some definite form of activity. I refrain from making any definite recommendation. I deliberately accept the role of a ruthless critic, in the hope that the profession may be awakened from the lethargy into which ages of false pride have reduced its members.

The difficulties which the State had to face, immediately after the conclusion, and mainly as a result, of the world-war, gave the architect and the profession an opportunity of a century. I am not contending in any sense that the war did not seriously embarrass the members of the profession, or that as a direct result of the great struggle, the ordinary flow of architectural employment through normal channels was not seriously checked, in fact very largely suspended. But I do suggest that a torrential flow of entirely new or almost entirely new work was released as the direct outcome of the cessation of hostilities. This torrential flow of new work was somewhat unevenly distributed, and in that direction left much room for complaint, but such uneven distribution appeared to be inevitable in view of all the circumstances peculiar to the architectural profession particularly referred to in my opening remarks.

The question I have asked myself over and over again, is, did the architect rise to the occasion. Did he realise the chance the war had given him, and his profession, or did he creep out from his seclusion and practise his art with a benumbed and slow moving mentality—taking so far as his opportunity permitted full advantage of the difficulties and trouble of the State—first to practise his art without consideration of the consequences, and secondly to earn fees, large ones if possible, without a thought of his master, the State, and without a thought of the effect of his actions upon the future of the profession.

One would ask again, does the architect occupy the place that is his due, in the social structure of to-day, and has he taken his share in the burden of the present time. Is he in experience, and knowledge, and by training, competent to undertake the duties he owes to the State. Is he serving his profession in the fullest sense, without giving his proper quota to the matters which are vital to the State.

It may be that the answers to these queries are in the negative. It is possible that some may argue that the answers to these questions are in the affirmative. That I feel would be the unkindest thing to architects and architecture, for should this be the case truly there is no hope for the sorry plight of the profession.

I want to be understood as discussing all these matters with the rank and

file of the profession, not with the great and mighty whose names are known throughout the length and breadth of the Empire, not with the eminent and distinguished or the well-established and affluent, but with the great body of the profession. The struggling and trained, efficient young practitioner, the backbone of the profession. Those who produce the homes and halls for the million and into whose hands are placed the life and vitality of the future generations of the people. Those who produce the palace, the mansion and the monument, require no defending. They want no advertising, they desire none, it is pressed upon them, they are above the mundane things of life, and have no time for the consideration of matters vital to the rank and file of the profession.

It is kindness to be cruel, and to face the fact that so long as the architect has plenty of work, that is to say professional work pure and simple, he thinks little of matters outside, such things are beneath his notice.

The fact is the architect consistently ignores the science of his craft (and he is taught studiously so to do) and clings tenaciously to the art. He is supinely unconscious of the place of architecture in the structure of modern life.

When I refer to the science of the craft, it must not be considered that one means the science of building or that of construction, but rather the scientific place in the world of the architect and architecture. What part in modern life does the art of architecture take, and what part the real science of building. What consideration does the profession through its representative bodies, give to the science of the profession, and what consideration to the art. Is the latter not considered the all of architecture, and the former neglected, and its study untended and uncared for. Where does the art of architecture begin and where does the science end. Is the art of the craft properly married to the science or if ever married at all, has it not been divorced.

One, as already stated, hears much of educating the architect of the future, will that education be sound if no place is given to the consideration of the immense value of the art of building to modern everyday life. Is the architect of the present day fully conversant with this phase of the subject. Has the subject of the education of the general public as to the value of architecture in modern life been given proper consideration by the profession, and if not is this not a matter which should be taken in hand at once.

I would wish the members of the profession very seriously to consider whether sufficient time has not already been spent resting contentedly upon the feather bed of the art, and that the profession has forgotten, if indeed the lesson was ever learnt, that the people live in houses and not upon them. The propagandist and housing reformer preached for many years before the outbreak of the war, a new system of area development and a new system of house planning. The architect, that is to say the gentleman who works entirely for fees, came into the thing just after the signing of the Armistice.

Did he assist to any appreciable degree those who had preached for years, or, in fact, the State which was faced with the gigantic task of overtaking the enormous arrears in housing for the people, or did he forget his responsibilities to the State, if indeed he ever fully appreciated them, and his duty to architecture, and allow his pencil to run wild in the dream of the artistic home, and did he forget that the bankruptcy of the State would be the inevitable result? All these things require serious and concentrated study. The architect must face the prime responsibility of the financial disaster of the great State Housing Scheme.

I am loath to blame the members of my own profession for that which is not rightly theirs, but a careful review of the whole of the circumstances sur-

rounding this great effort upon the part of the State must reveal a carelessness and a culpability of the most suicidal form.

No greater, and no finer effort to grapple with one of the greatest of social problems, has ever before been made by any country in the history of the world. No more magnificent conception could have been possible. This colossal effort was made when the finances of the country were well nigh the point of exhaustion; but those responsible for the launching of this great scheme designed to produce half a million homes in a few years had every reason to be proud of their offspring.

Those at the head of this gigantic undertaking, I do not acquit of all blame for the difficulties that arose during the putting of the plan into execution. Some of the initial steps taken without a careful scrutiny of the forces, dormant though they were, waiting to waylay the unwary; were faulty, and provided the opportunity to all those who considered any State effort fair game for plunder, and that opportunity was taken advantage of with celerity.

In my opinion the State had a perfect and justifiable right to expect the fullest and completest assistance from all those who were fitted by training to help in the consummation of this great housing effort. That the State did not get this assistance is common knowledge to all those who have the slightest intelligence or who stop for a moment to think.

The architectural profession in its excitement to grasp a great flood of new and unexpected work, overreached itself. Set about the designing of ideal homes and ideal lay-outs, the pencil went wild, artistic houses were to be erected at last; steep roof-pitches could now be adopted, picturesque gables, and the little artistic features so dear to the heart of the artist could be incorporated, without the slightest danger of being "turned-down."

It is seriously suggested that the architect, as the fountain-head of this national effort, the rapid and practical execution of which was to stem, and, if possible, dissipate a very serious and dangerous menace to the State, should have practised his art with a very keen and critical eye upon the serious financial side of the problem.

It is just at this point that the architect and the profession missed the opportunity, the danger was not even seen, the architect, I believe, would largely argue that he was not called upon to view this side; that is where the architect and the profession went wrong.

The great public for once were to be favoured with an exposition of the real value of architects in a great housing effort. The effort to a point has been successful, if the work only is viewed, apart altogether from the question of cost. Is that quite satisfactory? What architect in private practice would be successful (speaking again to the rank and file) if he refused or neglected to consider the important question of cost?

The unfortunate feature of this great National Housing Scheme is that the architect's example was followed throughout all the arms of the industry. Architects profited in that their art occupied too large a part in this great undertaking. They expected to get from something more than that something could give.

Other arms followed, and in their various spheres bled white this tremendous effort to house the people.

Two hundred millions capital loss will be the price to be paid for this great effort to correct the errors of generations in the housing of the people.

That would not have been too great a price if the entire scheme had been brought to fruition; but it has not, and the measurement in number of houses that this scheme falls short of fulfilment will be the extent of the responsibility

of the entire industry, and the architect takes his full share of this liability.

Housing provision for the people necessarily will have to be continued. Exactly how is not at the moment a matter I care to discuss. Houses must be provided in sufficient numbers, and I sincerely trust that the great national effort, so far as it has been carried into effect, will guide and control the methods of house building in the future. Whether architects in the future will be engaged to the extent that the profession hoped and expected is another matter.

Is there room for proper and efficient architectural intervention in a proper and economic provision of housing for the people.

Certainly there should be, and it is the duty of the architect to the State to formulate proposals whereby the architect comes in as part of economic National Housing.

If the employment of professional assistance renders a building proposal uneconomic, there is fault somewhere, where is it, the profession must investigate and correct the wrong.

Economic house building must be. If possible with architectural assistance. If not without.

The duty of the profession to the State is clear in this matter. Will the profession act, or will that artistic temperament recoil at such a nauseous task and force the great public to be denied the services of the members of the profession.

I trust that these few fragmentary remarks will not be taken unkindly. They are delivered with the intention of assisting the profession to occupy a more important and a more recognised, and, shall I say, a more popular, position in the estimation of the people.

Many of my remarks may bear harshly upon numerous members of the profession. Many of my statements may be incorrect when applied to a very large number of the members of the architectural profession and may be resented.

If the effect of hard words be to infuse some life into the rank and file of the profession I shall have succeeded in my task to a point.

I am too hardened to be hurt by hard thoughts or bitter comments. To move the members of my profession into action, to galvanize into life some of the pious wishes of the many, and to succeed in winning some better universal recognition for architects and architecture will be sufficient payment for my slight, if somewhat caustic, talk to the members of the Society of Architects this evening.

DISCUSSION.

MR. L. SYLVESTER SULLIVAN, in opening the discussion, said the President had been trailing his coat and that all who could should tread on it. He thought it was partly the architect's own fault if at the outbreak of the War his services were not utilised by the Government to the best advantage. As regarded professional advertising, he instanced several ways in which architects could and did advertise, and, having expressed the view that most architectural bodies were more or less mutual admiration societies, he went on to suggest that one way in which architects might make themselves of more use to the State, with especial reference to Housing, was to convince the speculative builder that it was an economic proposition for him to employ an architect.

SIR HENRY TANNER thought that the business side of the architect's profession needed to be brought more prominently before the public. Most of his clients were business men, and architects had to show them that they could get a proper return for the money which they spent on their buildings, and the Architectural Societies

should do something in support of this view. In regard to the relations of the architect to the State, he thought the President had not dealt with it in quite an ordinary way, and he could not see what the architect could do except use his influence in a general way. In regard to Housing, he considered that the President had blamed the wrong person, and that it was not the architect who was responsible for the excessive cost of the houses. In his opinion it was due rather to Government control, and he failed to see that the architect was to blame for that.

MR. HENRY BRANCH stated that it was his experience that the Government took architects at their own valuation which they had themselves proclaimed purely as artists and draughtsmen, which was a very serious thing for architects as it left out of court most important parts of their life work. Having referred to the essential qualifications and necessary training of an architect, he suggested that an architect in active practice had very little time to devote to matters outside his profession, and he was startled at being told that he was one of those responsible for the failure of the Housing Schemes of this country. He hoped Sir Charles would give them more information on this point, as he was under the impression that most of the National Housing Schemes were promulgated under conditions which did not give the architect much scope for the exercise of his art. He pointed out that the dearth of houses was not entirely due to the War, and that long before that time legislation had practically stopped, through its financial embargo, the operations of the speculative builder throughout London.

MR. E. J. SADGROVE said he was in entire opposition to the views which Sir Charles had expressed, and he disagreed entirely with the suggestion that architects should have been aware of the position of the finances of the State before they undertook the designing of the houses. If anyone was responsible for plunging the country into commitments for houses surely it was those at the head of the Government Housing Departments. In many cases the services of architects were not requisitioned in regard to these schemes. He entirely disagreed with the statement that architects were responsible for the high cost of the houses. This high cost was due to other causes with which Sir Charles was acquainted and of which they all had some inkling. He was extremely sorry that Sir Charles had used words to the effect that the profession had over-reached itself and that architects considered the State fair game for plunder. He strongly objected to that implication, and stated that architects did nothing of the kind. The trouble was that when the State began to find that they were in financial difficulties in regard to Housing Schemes they wanted to throw the blame on architects, who were no more to blame and no more responsible for the state of affairs than any other innocent arm. It was because the profession was not unified that they were not in a position to convince the State as a body at the outbreak of hostilities that their services could be retained in their professional capacity. He supported the previous speaker in regard to the point that an architect had to give his whole attention to his professional duties, and it was not until he had attained an assured position that it was possible for him to place his abilities at the disposal of the public. Sir Charles had, apparently, intentionally treated architects very roughly, but he, the speaker, did not think that Sir Charles himself believed half of what he said in the condemnation of architects, and he thought that architects ought to retort in a way which would prevent it going out to the public that Sir Charles meant what he said. He maintained that Sir Charles had no right to condemn architects for any faults or failures in the State Housing policy, and in regard to architects generally, he thought they would study the interests of their clients more if they paid equal attention to the commercial side as they did to the æsthetic.

MR. ROBERTSON made some interesting observations on the difference between professional practices in America and in England, instancing the formation of co-operative offices. He advocated a wider use of the legitimate means at the disposal of architects for securing publicity.

MR. ELLIS MARSLAND, dealing with the indifference of the general public to the architectural profession, said the first thing was to convince the public that by employing an architect they would save money. In regard to State housing, he drew attention to the enormous difference in the cost of some houses erected by private enterprise and those built by the Office of Works for a Public Body, the former being a much more economical proposition than the latter. He personally advocated architects combining building with their profession as a solution of the problem, particularly in regard to housing. It was done in other countries, such as America and Germany, and, he thought, Italy, and if there was anything in the view he had expressed, he thought it might be worth following up.

MR. T. SCHAEFER agreed with the speakers who expressed the view that the President was entirely wrong in putting the blame on architects, and he altogether disagreed with Sir Charles' remarks so far as they blamed the architectural profession for the failure of the Government Housing Scheme.

The President, SIR CHARLES T. RUTHEN, in replying to the points raised by the speakers, said he disagreed entirely with the speaker who advocated architects building houses or carrying out the building work themselves, he thought that would be disastrous. If they were not able to carry out all the departments of their architectural practice he thought they had better not go into another one. He agreed with Mr. Robertson that the architectural practice was a very wide one, and that it was difficult to find an architect who was a business man, a builder, and contractor and a designer. If he was going to buy bricks and manage a joinery shop, and look after the men, he was going to leave the profession as he thought it was too hard. The Director General of Housing would be a soft job compared with it because, after all, he had not got to do anything, he had just got to talk. Mr. Sadgrove, alluding to his (the President's) remarks about the bankruptcy of the State says: "What do we know about the State?" That is what he complained of. Mr. Sadgrove said that he did not know about it. Then he thought he should be ashamed of himself. He thought that for anyone of the experience, age and architectural knowledge of Mr. Sadgrove, to get up and say that he did not know the position of the State, well, his answer to that was, that he ought to. Sir Henry Tanner blamed a department which was carrying a lot of blame to-day as well as other materials, a department known as the D.B.M.S. There was a very good answer to that. He took over the head of that Department when he took over the other Department. It was not a nice job and he got quite a lot of bricks at the time, he thought it was a thousand million. They did not like to think about it, it was such a pile. The D.B.M.S. did not account for the high price of baths, and if the D.B.M.S. had not existed they would not have to-day to pay £4 a thousand for bricks, but £10 a thousand. It must be remembered that if the D.B.M.S. had kept up the price of bricks, and he agreed to a point that it was correct—it did stop bricks going above that point and that was even more accurate than what they thought. He could tell them some hair-raising stories. He remembered a case where a gentleman sitting on the other side of the table was a brick manufacturer in a certain district where the D.B.M.S. had a large number of bricks, and he complained that he could not sell bricks as the D.B.M.S. had so many bricks there. He said that that was very unfortunate as they did not buy them as drawing room ornaments for Members of Parliament but for building purposes. He then asked the gentleman how many brick manufacturers there

were in his district, and he replied that there were two others within 40 miles. He asked him if they were all friends, and he replied: "well, er—yes." I then said that if I did not have any bricks in that district, what would be the price of his bricks, and he replied: "yes, I see the point," and I said: "yes, so I am keeping the bricks in your district. If you can supply me with bricks at 45/- I will seriously consider the matter as that is the price to-day." The price of bricks never went above the fixed price. The D.B.M.S. was not responsible for keeping up the price of materials which it did not own. For instance, there was the question of baths. Most houses had baths, and most people would like better ones than those they have, but he thought these necessary articles for modern houses were very expensive and it was only the fear—and perhaps the gentlemen of the Press would notice this—that the baths would arrive from somewhere else, that brought down the price of the baths. After all, he thought one would like to have a very real strong talk about the cost of building. There was no subject that he would better like to handle with anyone responsible for the various departments of building than that one subject. Mr. Sadgrove had said that he did not believe that I believe one half of what I say. He may be right, but he may not. It does not matter, there is nobody who believes less than what anybody else says than what I believe Mr. Sadgrove said—he hoped they understood. He felt it was perfectly insane for the Architect to pat himself on the back and say to himself: "I had nothing to do with the cost of building; no, nothing whatever; it is not my business at all," or: "I had nothing to do with the cost of the buildings, I simply draw plans." He then said there was a department telling him what to draw, and so he became a draughtsman. Who was in the Department? Who told the architect to draw the plans? Was it a scavenger? Certainly not. The Government Departments were guided by professional assistance second to none. They had men at the head of the Government Departments who were the best men. They were certainly, if not the very best men in the profession, amongst the best, and those men set out to do the best they possibly could. One speaker had said that he would be sorry to be connected with any of the houses which had been built, whilst another one wanted to know where they got them from, all different kinds of this that and the other. After all, he believed the Ministry did attempt, very much against the wishes of the architectural profession, to indicate that it was advisable that the houses should provide the maximum of accommodation and from the point of view of capital cost and annual maintenance that they should be as simple as possible. He had seen perhaps more housing schemes in this country than any living man; he thought he had been in more houses than any man had ever been in that had ever lived in this country. The finest housing scheme in this country contained the simplest houses, had not a single gable, or a single projection on the front wall, on the back wall, or the side walls. They contained the finest rooms and in every way were the finest. The beauty of the whole scheme was the distribution of the houses on the site. 'It was wrong for the architect to think that because he had the opportunity to arrange the houses under a State aided housing scheme, that it was therefore absolutely necessary that he should have a bulge here and a break there and that gables were essential for houses for people to live. He said that it was wrong, and he also said that if they had any money to spare, spend nothing on ornaments which would add to the capital cost and add to the annual maintenance of the house, but spend it in giving people the extra space which was necessary. The rooms were small enough, but for the architect to stand aloof and refuse to take any responsibility for the cost of these State Housing Schemes, was wrong. He might blind himself to the fact that he had got nothing to do with it. He was responsible for the high cost of building. The

Government had a lot to do with it, well, all Governments had a lot to do with everything, that was the penalty of being a Government. The operatives put out as little as they possibly could, that was their method of profiteering, the architect said: I will get as much architecturally out of this scheme as I can, that was his profiteering effort and extremely successful it was. The people who supplied the various articles known as light castings said: here is a fine opportunity, and they did it as well as everybody connected with house building. You say: Why blame the architect? I do not blame the architect, I blame the architect and everybody else, not only the architect. I say: That the architect was the first. Does he wish me to say that he is not the head of the great building craft? If he does very good, he may wish I did not agree. He is the leader and he comes along and everybody follows. Well, there is the position for the architect and for the architectural profession, and it is no good them saying: We do not know anything about the financial losses. That was not fair to the intelligence of the architect because he thought most architects have some little intelligence. One could put it as high as that and to think that he could go on building houses which showed an annual loss per annum per house of £60, was, of course, simply appalling. It was not a question of architects having no work. If it went on like that, they would soon have no need to collect their salaries anywhere, they would be collected for them, and they would give their receipt for their salary and the Income Tax Collector would give them a receipt for their income tax which would swallow all their salary. He did not know how long they would live, but he believed architects lived a long time, although they would get thin and the houses they would want would be very small. The question of the cost of building he would like to debate with those people who thought they were not responsible, for instance, architects, building trade employers, or operatives, or possibly brick manufacturers, or the people who supply other things, such as baths and pipes. He would dearly like to do that because the cost of building had come down notwithstanding what some people said. It might not be due to any efforts on the part of the Government or of Government servants, but it had come down and it was a very peculiar thing that it had come down during the last nine months. It might not be due to any efforts on anyone's part, just the kindness of heart of the building industry, but it had been due to a certain step and a series of certain steps, and it was obvious to certain people long ago and should have been obvious to the rank and file of the profession and the leading bodies of the profession. They should have been in a position to say: "No, don't do that, because of so and so." If the leaders of the profession had done that, there would be no £1,100 cottages, and if the steps which were taken only nine months ago had not been taken, they would have been seeing £2,000 cottages to-day quite comfortably. He would give them an inkling in one sentence where the fault was. The work given out exceeded the capacity of the industry which was being added to and added to, and as the industry had work piled on top of it beyond its capacity, their output was dropping, dropping, dropping. That was the secret of the whole thing, they could look at it whichever way they liked and the alteration took place when the piling up ceased and somebody began to reduce the pile which had actually been given out, and to-day he had no hesitation in saying that there was some hope. When he said nine months ago it would be possible to get a £500 house, he was sure people thought he was a candidate for a place other than a Government appointment. It was not far off. £550 was quite a common price; £450 was an actual price last week; £475 was not an unusual price. Let those who talked about the possibility of building a £500 house think that over. These very houses that they had erected in London—the London area—less than a year ago were being erected at a price that at

the present time they can be comfortably and will be erected and are being erected in districts surrounding London and near by, for a figure within £25 of half the cost on the same specification, on the same site, with the same materials, and to the same plan. These were the same houses from the same plan, with the same materials, the same architect, on the same site and built by the same contractors. There was one case he could tell them of. A certain figure was given for the cancellation of one contract. He could have let the same house within an hour at £300 per house less, in the same office on the same day, and the price which was paid as compensation and which he was responsible for paying was not £300, it was £260, which was less than £300. When they came to multiply a figure like that by hundreds they could see the position. His difficulty was not that he did not want the contractor to line his pockets, it was not that he did not want the operative to take his time for his work; it was not that he did not want the architect to draw his fee—low as it was. It was because the men did not live to build them. There was only one method by which they could reduce the volume that they were piling up to a certain limited number of men, and that was the reason why the output was increasing. It was a mistake to think that a man worked harder if he saw a life time of work in front of him. The man who works hardest was the man who had to go out and fight for his living. The man in a new country did not lie down and wait. No, he went out and looked for work. In conclusion he said that his use of the word "State" was in the broad sense. He meant the whole of the State and everything that comprised the State, not the State servants. He meant the whole of the State as we understand it in this country. He thanked them very much for their very patient hearing of a rather dry and perhaps somewhat difficult subject.

The Architect and the State.

At a Special Meeting of the Council of The Society of Architects held on January 18th, 1922, the following Resolutions were carried unanimously:—

- (1) THAT THIS COUNCIL DISSOCIATE THEMSELVES FROM THE VIEWS EXPRESSED BY SIR CHARLES T. RUTHEN, PRESIDENT OF THE SOCIETY, IN HIS PAPER ON "THE ARCHITECT AND THE STATE," PARTICULARLY AS TO THE RESPONSIBILITY OF THE ARCHITECTURAL PROFESSION FOR THE FAILURE OF THE NATIONAL HOUSING SCHEME, AND FROM THE IMPLICATIONS AS TO PROFITEERING BY ARCHITECTS IN CONNECTION THEREWITH.
- (2) THAT THE FOREGOING RESOLUTION BE COMMUNICATED TO THE PRESIDENT; THAT HE BE INFORMED HE NO LONGER POSSESSES THE CONFIDENCE AND SUPPORT OF THE COUNCIL; AND THAT, IN VIEW OF THIS RESOLUTION, HE BE ASKED TO SHEW CAUSE WHY HE SHOULD NOT BE CALLED UPON TO RESIGN HIS OFFICE AS PRESIDENT OF THE SOCIETY.

Resignation of the President.

At a Meeting of the Council held on January 26th, 1922, Sir Charles T. Ruthen personally tendered his resignation of the office of President of the Society, and the Council accepted his resignation.

Proceedings of the Society.

The thirty-seventh Annual General Meeting of The Society of Architects was held at 28, Bedford Square, W.C.1, on Thursday, January 12, 1922, at 8 p.m.

The President, Sir Charles T. Ruthen, O.B.E., having taken the chair, the minutes of the previous meeting, as published in the *Journal*, were taken as read, and were confirmed and signed.

The following announcements were made :—

NOMINATIONS :—For Fellowship, 2 ; for Membership, 9.

ADMISSIONS :—

AS LICENTIATE :—MATHER, THOMAS JOHN, Shire Hall, Llangefni, Anglesey.

DEATH.—Sympathetic reference was made to the death of J. W. STALLEBRASS, Member, of March, Cambs., elected 1907, died December, 1921.

RESIGNATION WITHDRAWN.—ROWLAND, D. G., Licentiate, of Southend-on-Sea.

ELECTIONS.—The following candidates, whose nominations had been previously announced and published, were submitted for election under Articles 12 and 17 of the Articles of Association, and were declared to be duly elected :—

FELLOWS TRANSFERRED FROM MEMBERSHIP.—IMRIE, GEORGE BLAIR, 2, Mitre Court Chambers, Temple, E.C.4, LEY, ALGERNON SYDNEY RICHARD, F.R.I.B.A., 214, Bishopsgate, E.C. 2, and STONHAM, PETER DULVEY, 58, Grove Road, Eastbourne.

MEMBERS.—ADAMSON, JAMES EDGAR, 10, Idlesleigh House, Caxton Street, S.W.1, ANGELL, THOMAS GRAVELEY, 2, Mitre Court Chambers, Temple, E.C.4, CHESTERTON, MAURICE, 28, Willifield Way, N.W.11, COLLIER, FRANK, Barton House, 66a, Deansgate, Manchester, GREENEN, WALLACE AUSTIN, Fellows Road, Cowes, I.O.W.

COUNCIL'S AND AUDITORS' ANNUAL REPORT.—An abstract of the Council's Annual Report and the Auditors' Report for the year ended October 31, 1921, showing a debit balance reduced from £1,189 to £109 was read by the Secretary.

There being no questions raised, it was resolved that the Annual Report and Balance Sheet as presented be received, adopted, and entered into minutes.

ELECTION OF AUDITORS.—It was resolved that the Auditors, Messrs. Bolton, Pitt & Breden, be re-elected for the year ending October 31, 1922, on the present terms and conditions.

The President, Sir CHARLES RUTHEN, O.B.E., read a paper on "The Architect and the State," and a discussion followed, in which the following took part :—L. SYLVESTER SULLIVAN, SIR HENRY TANNER, HENRY BRANCH, E. J. SADGROVE, H. M. ROBERTSON, ELLIS MARSLAND and T. SCHAEER. The President, having replied to the points raised, the proceedings terminated.

At a Special Meeting of the Council of The Society of Architects held on January 18, 1922, a resolution was carried unanimously that they dissociate themselves from the views expressed by Sir Charles T. Ruthen, President of the Society, in his paper on "The Architect and the State," particularly as to the responsibility of the Architectural profession for the failure of the National Housing Scheme, and from the implications as to profiteering by Architects in connection therewith, and at a meeting of the Council held on January 26, Sir Charles T. Ruthen attended and personally tendered his resignation of the office of President of the Society, and the Council accepted his resignation.

Correspondence.

TO THE EDITOR, THE JOURNAL OF THE SOCIETY OF ARCHITECTS.

FIRE RESISTING CONSTRUCTION.

SIR,—We have read with considerable interest the article on "Fire-resisting Construction and Fire-Prevention" by Mr. E. W. Winks in your issue of January, and being manufacturers of Slag Wool, our attention has been particularly centred in his references to this material, but we would ask permission to contradict his statement that "where there is vibration it will crumble, being of brittle nature, and lose its sound-proof properties."

This is altogether misleading, if not wholly incorrect.

Slag Wool, although a mineral fibre, is not brittle, it is practically as soft as wool, is elastic, and does not crumble under vibration.

This is proved by the fact that for many years it has been used as a non-conducting lagging for locomotive boilers of which the jolting and vibration are very considerable. It has also been used very largely and with great success for cold storage insulation on shipboard where there is constant vibration from the engines and from the buffeting of the seas.

We cannot imagine any building on land being subject to the vibration that occurs in either of the cases cited.

It may interest your readers to know, that, some years ago, this material was tested by the British Fire Prevention Committee to ascertain its fire-resisting properties:

- (1.) On a match-boarded wooden studded partition subjected to a fire of 45 minutes duration commencing at 300 deg. F. and increasing to 1,800 deg. F., at the end of which period the fire had not passed through the partition and the temperature on the other side of the partition had not been raised 1 deg. F.
- (2.) As a protection to a wooden-joisted ceiling where the Slag Wool was applied behind the matchboarding, to record the effect of a fire of one hour's duration, the temperature rising to 1,800 deg. F. At the end of the test although the matchboarding was entirely consumed, the Slag Wool had prevented the fire from burning the wooden joists and the fire had not passed through the floor.

Another very interesting fact is that in an actual fire which occurred in a building in Ireland within which building was a cold store insulated with Slag Wool, the building was destroyed and the outside of the cold store was burned away, but the Slag Wool had prevented the fire and the heat from reaching the butter which was stored within, and the butter actually remained unmelted although in the midst of a huge conflagration.

The best qualities of Slag Wool are now being sold under the name of "SLAGBESTOS," which better describes its mineral composition and suggests its fire-resisting qualities.

In addition to the good qualities which Mr. Winks attributes, with justice, to Slag Wool, it has the merit of being anti-dry-rot owing to the great amount of air the Slag Wool holds in its wool form.

Eminent architects specify Slag Wool for sound-proofing for which purpose it is unequalled and because they do not have to fear the dread disease of dry rot attacking the timbers which often occurs when more solid and less effective so called "sound-proof" media are employed.

JNO. A. NELSON,

Director.

F. MCNEILL & CO., LTD.,
4, South Place,

Finsbury Pavement, E.C. 2.

January 9th, 1922.

Report of The Council of the Society of Architects

For the Year Ended October 31st, 1921.

Adopted at the Annual General Meeting on January 12th, 1922.

ART AND LITERATURE COMMITTEE (Chairman, MR. PERCY B. TUBBS, F.R.I.B.A., F.S.A.R.C., Past-President. The following programme of meetings was arranged and carried out:

1920.

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| November 11th. | Presidential Address by SIR CHARLES T. RUTHEN, O.B.E.,
F.R.I.B.A., F.S.A.R.C. |
| December 20th. | "The Halls of the Old City Companies," MR. H. W. WILLS,
F.R.I.B.A. |
| January 13th. | Council's Annual Report. Presentation of Victory Scholarship prizes by the President, and criticism of the designs by MR. ARTHUR DAVIS, F.R.I.B.A. |
| February 10th. | "Glastonbury Abbey," MR. F. BLIGH BOND, F.R.I.B.A. |
| March 17th. | "Acoustics," MR. HOPE BAGENAL, A.R.I.B.A. |
| April 21st. | "Westminster Abbey," MR. A. R. CONDER, A.R.I.B.A. |
| May 12th. | "Architectural Education," MR. L. SYLVESTER SULLIVAN,
F.S.A.R.C., A.R.I.B.A., Vice-President. |
| October 13th. | Election of Officers and Council, and presentation of Students' prizes by the President. |

LIBRARY.—The equipment of the library premises with additional shelving and the rearrangement and cataloguing of the books has been completed. A number of new volumes have been acquired by presentation and purchase, and the collection is now available for reference, or books may be obtained on loan in accordance with the Library Regulations.

The Committee desire to thank those Authors, Members, and others who have presented copies of their books, and invite further gifts and also donations to the Library Fund and offers of service in reviewing books.

EXAMINATION COMMITTEE (Chairman, MR. SYLVESTER SULLIVAN, F.S.A.R.C., A.R.I.B.A. Vice-Chairman, MR. NOEL D. SHEFFIELD, F.S.I., F.S.A.R.C.

The Committee has received and accepted with great regret the resignation of the Chairman, PROFESSOR HENRY ADAMS, who had held that position for 20 years, and who, owing to age and increasing physical disabilities, is no longer able to undertake the duties.

The Committee desire to place on record their appreciation of his long and valuable services to the Society as Chairman of the Committee, and as an Honorary Examiner, and their sense of the loss which his retirement from office will entail upon this branch of the Society's work.

The Society Membership Examination Scheme has been remodelled in view of the reorganisation of the membership regulations, and a system has been devised and adopted which combines a practical and theoretical examination with the addition of an oral test. The Examination is conducted on lines which enables candidates to work the questions at any centre, as though they were problems arising in the ordinary course of their practice. Prizes of the total value of £175 during the year in addition to medals and certificates were offered under certain conditions.

These Examinations were held during April and October, 1921, when 30 candidates completed the papers, of which number 10 satisfied the Examiners. Three candidates gained certificates of merit, and two certificates of honour, one of whom was in addition awarded a prize of twenty-five guineas as the best candidate of the year.

The Examiners' reports indicate that almost without exception the standard exhibited by the candidates worked answers is a low one, and that in certain subjects, notably the Thesis, too much reliance is placed upon text books. Candidates who have been relegated in Design are recommended to take a course of instruction before sitting again, and a report is to be prepared on the Examination generally for the guidance of future candidates and as an indication of the standard of proficiency expected.

With the exception of the Victory Scholarship Competition, there were comparatively few entries for the other prizes offered by the Society, and the merit of the work submitted was not sufficient in some cases to justify the Assessors in making the full award.

All the Society Competitions are assessed on the jury system, and the following is the list of successful competitors:—

VICTORY SCHOLARSHIP (Open), £100 and a Gold Medal.—Prize divided and medal duplicated. (1920) TRENWITH WILLS, A.R.I.B.A., and F. P. M. WOODHOUSE, A.R.I.B.A.; (1921) J. H. WHITE, A.R.I.B.A., and BRIGHT FRAZER, M.S.A.

Quarterly Competitions (Licentiates and Students of the Society):—

JANUARY.—Design. W. A. FENNELL, Student, Croydon. Prize value £6 6s.

APRIL.—Thesis on Construction. C. A. BROWNE, Student, Birkenhead. Prize value £3 3s.

JULY.—Sketches. R. D. COLDHAM, Licentiate, Barnet. Prize value £6 6s.

OCTOBER.—Measured Drawings. R. D. COLDHAM, Licentiate, Barnet, prize value £4 4s., and F. S. GREEN, Student, London, prize value £2 2s.

It has been decided to discontinue the Quarterly Competitions and to substitute two half-yearly Design Competitions, each to the value of £40, particulars of which will be announced in due course.

TRAVELLING STUDENTSHIP (Design).—J. F. HAMPTON, Licentiate, Paddock Wood. Prize value £15 15s.

ARCHITECTURAL SCHOLARSHIP (Measured Drawings).—J. F. HAMPTON, Licentiate, Paddock Wood. Prize value £15.

TREHEARNE-NORMAN PRIZE (Thesis).—No entries.

PRACTICE COMMITTEE.—Chairman, MR. A. J. TAYLOR, F.S.ARC., Vice-President; Vice-Chairman, MR. THOS. WALLIS, F.S.ARC.

MEMBERSHIP.—90 Fellows, 95 Members, 75 Licentiates, and 42 Students have been added to the respective Registers.

35 Members and 21 Students were removed from the Registers under Article 57.

After allowing for deaths, resignations and other cessors of membership and for transfers, the following is the strength of the Society on October 31st, 1921:—

	1921.	1920.
Fellows	180	93
Members	1,133	1,146
Honorary Members	24	24
Retired Members	37	39
Licentiates	110	37
Students	111	102
	1,595	1,441

DEATHS. The Committee report with regret the following deaths:—

Fellows.—S. N. CHANDABHOY (Bombay), W. P. RYAN (London).

Members.—C. COLE (Local Secretary, Exeter), H. S. COUCHMAN (London), J. M. DICK-PEDDIE (Edinburgh), T. R. GREIG (London), R. S. GRIFFITHS (Tonypandy), W. H. L. KEAY (London), A. B. LINFORD (Wombwell), W. Kirk (Groombridge), MARTYN MEAR (Rock, nr. Wadebridge), H. METCALF (London), A. J. McDONNELL (London), E. WILLIAMS (Bristol), J. B. MORGAN (Llanelly), R. E. BRINKWORTH (Bath), J. BUTTERS (Ludlow), N. J. SANJANA (Bombay).

RESIGNATIONS.—The following resignations have been accepted with regret:—

Members.—P. M. BEESLEY (Shanghai), J. W. B. BLACKMAN (Vancouver), S. N. COOKE (Birmingham), A. COWLISHAW (Tasmania), A. H. DUNGAY (Farnborough), J. P. FIRTH (Wakefield), A. GREATOREX (West Bromwich), P. S. PARRIS (Crowthorpe), J. PATTINSON (Windermere), L. L. PEARSON (James Island), F. J. PURVIS (Cootamundra), T. SPENCER (London), G. STAPLEY (London), W. N. TWIST (Birmingham), J. H. WATERWORTH (London), W. WILKINSON (London), W. S. R. BLOOMFIELD (London), PERCY HOLLAND (Newmarket), G. A. BIRKENHEAD (Vancouver), R. CROMIE (London), W. MILLS (San Francisco), W. PARKINS (Cape Town).

Students.—P. T. KEEBLE (Braintree), W. V. COUPLAND (London).

REINSTATEMENTS.—The following have been reinstated to membership:—R. BANKS-MARTIN (London), VINCENT DAVISON (New Maldon), S. F. EVERSHERD (Newbury), R. R. WENTWORTH HYDE (Worthing), A. J. LACEY (Norwich), H. G. B. RIDGES (Southampton), C. L. RUTTER (Parkstone), E. STOCKWELL (Maidstone), W. G. WILLIAMS (Bangor).

DISCIPLINE.—Three enquiries under Art. 23 of the Articles of Association have been held in connection with alleged breaches of professional etiquette by members. In one instance the member concerned tendered his resignation, and in the other cases the Committee of Enquiry were satisfied that the Regulations had not been infringed.

ARCHITECTURAL COMPETITIONS.—The following Competitions were barred by the Society owing to unsatisfactory conditions:—

Gateshead, Barcelona, Llandudno, Rothesay, Leigh, Renfrew, Queensbury, Salisbury, Hagley, Wick, Sutton Coldfield, Hereford, Whiteinch, Chelmsford, Auckland, N.Z., Colwyn Bay, Ilford, Bury, Southend.

The K.O.Y.L.I. War Memorial Competition drawings were exhibited at the Society's premises at the request of the promoters.

The promoters of the following competitions amended the conditions and the Society waived its objections:—

Llandudno, Bury and Auckland, N.Z.

The Society supported the Ulster Society of Architects in asking that the selection for the Architect for the Northern Parliament House should be by open competition.

A scheme initiated by the Secretary urging the formation of a joint committee of architectural bodies to regulate the procedure of architectural competitions was approved by the Committee and circulated to all architectural bodies in Great Britain in March, 1921. It appeared from the replies received that the principle involved was acceptable, and after prolonged negotiations a joint meeting of representatives of the R.I.B.A. and the Society has been arranged with a view to going further into the matter.

MODEL CONDITIONS FOR HOUSING COMPETITIONS.—The Committee had before them the proposed R.I.B.A. Model Conditions for Competitions for Housing Schemes,

and recommended them for approval by the Council of the Society subject to the deletion of Clause 11, which laid down that the competitor should be guided by the suggestions contained in the pamphlet issued by the Ministry of Health.

Subject to this reservation the Council approved the conditions, and they were published in the Society's *Journal*.

POINTS OF PRACTICE.—The Committee have frequently given advice to members on points of professional practice relating to Housing Fees, Contracts, Building By-Laws, Wages, Specialists' Fees, Arbitrations, Certificates, Custody of Documents, &c., &c. Some thirty cases have been considered and dealt with during the Session by the Committee, who have reason to believe that the assistance thus given to members has been of considerable help to them.

CODE OF ETHICS.—The Society's Regulations for professional conduct and etiquette have been revised and strengthened in certain directions, particularly in regard to architectural competitions, and the inclusion of a clause of the Councils' views that the calling of an Auctioneer or House Agent should not be carried on or conducted by an Architect. The revised regulations have been published in the Year Book.

SCALE OF CHARGES.—The Committee have had before them points relating to discrepancies in the scales of professional charges of the Architectural and Surveying professions in certain particulars (not connected with Housing) and have considered other suggestions made for amending the scale, and as a result of negotiations with the R.I.B.A., a joint conference of representatives of the two bodies has been held, with the result that it is not considered desirable at present to amend the existing scale.

DUTIES OF LOCAL HONORARY SECRETARIES.—The Committee have drawn up a schedule of duties for the guidance of Local Honorary Secretaries of the Society, which have been published in the Society's *Journal*.

FORM OF BUILDING CONTRACT.—The Society is taking an active part in a conference of interested bodies to discuss the question of a standard form of Building Contract. Agreement has been reached in regard to the desirability of having an agreed contract, and the details are to be considered by a Sub-Committee on which the Society is represented.

MINISTRY OF HEALTH HOUSING FEES. The Society's representatives have attended several conferences at the Ministry of Health in conjunction with representatives of the R.I.B.A., The Scottish Institute and other interested bodies, with reference more particularly to the scale of fees for abandoned work and the question of travelling expenses.

The outcome of these negotiations was the issue by the Ministry of Health of General Housing Memoranda No. 51D relating to travelling expenses, and No. 52 relating to fees for abandoned work.

The actions of the Society's representatives were endorsed by the Council at a meeting called specially to consider the matter.

The general body of the R.I.B.A. refused, however, to endorse their Council's approval, with the result that the Ministry of Health is to be invited further to review the subject.

CLERK OF WORKS FORM OF AGREEMENT. The Committee have had before them a suggested form of agreement for use between architects and clerks of works drafted by the Incorporated Clerk of Works Association. The only criticism which the Society found it necessary to offer was a recommendation that there should be no payment for overtime unless the actual work was being carried out overtime, it being understood that the draft conditions were subject to revision to meet individual cases, and were

not necessarily intended to be strictly adhered to as drafted.

INHABITED HOUSE DUTY. The Committee have accepted an invitation from the Surveyors' Institution to go into the question of securing for professional bodies occupying their own premises the same immunity from Inhabited House Duty as is enjoyed by business firms.

GENERAL PURPOSES COMMITTEE. Chairman, the President, SIR CHARLES T. RUTHEN, O.B.E., F.R.I.B.A., F.S.A.R.C. The Society's by-laws, drafted to meet the requirements of the new Articles of Association in consultation with the Society's legal advisers, have been completed by being submitted to and approved by the Board of Trade, and have been published in the *Journal* and reprinted for use as required.

Other matters referred to this Committee included the filling of the vacancy on the staff arising from the resignation of the Assistant Secretary, CAPTAIN M. G. KIDDY, on his appointment to the Secretaryship of the Concrete Institute. The Committee received and dealt with applications for the position, and recommended two candidates as possessing the required qualifications, for the consideration of the Council, who appointed MR. C. A. BARMAN, of London, to the position.

FINANCE COMMITTEE (Chairman, Mr. E. J. Partridge, F.S.A.R.C.).—The auditors' report and statement of accounts shows that the debit balance of £1,198 has been reduced to £109 during the year, and that had it not been for the necessary expenses incurred for decorative repairs, &c., there would have been a substantial surplus for the year. The chief item of increased expenditure is for repairs, prizes, examinations, and publications and donations, and there has been a decrease in general expenses, postages, and building exhibition outgoings.

On the other hand, the revenue from subscriptions has increased by £2,000, and from publications to £340. The balance-sheet shows a considerable reduction in sundry creditors, and, after allowing for the small debit balance for the year, there is an increase of over £360 in the assets, which are £5,484 in excess of the liabilities.

During the year the Professional Defence and Victory Scholarship funds have been invested. The Committee hope that members who have not yet subscribed to the Victory Scholarship Fund will assist in making up the sum of £1,400 required to complete the Fund.

WAR MEMORIAL.—The Society's War Memorial Tablet, designed by Messrs. Poynter and Wenyon, of London, executed by Messrs H. H. Martyn, of Cheltenham, and fixed in the Society's Council Chamber, was unveiled at the first meeting of the new Session, November 11th, 1920, the second anniversary of Armistice Day. The ceremony of unveiling was performed by the President, SIR CHARLES T. RUTHEN, O.B.E., in the presence of a number of relatives of the members in whose memory it was erected. A very appropriate and impressive oration was delivered by the Rev. J. A. SMITH BULLOCK, M.A., B.D.

UNIFICATION AND REGISTRATION.—The Society's representatives on the Unification Committee have taken an active part in the proceedings which have resulted so far in the establishment of the principle of a scheme for the admission of all qualified architects into the R.I.B.A., and the formation of a sub-committee which is discussing with the Society the details relating to membership. The Council of the Society is not in a position at present to make any announcement on the subject as the matter is still under consideration.

FIRST ATELIER OF ARCHITECTURE.—Last March Monsieur Chaurès accepted the position of Patron of the Atelier, and shortly afterwards, when the office of Chairman of the Beaux Arts Committee became vacant, Mr. J. W. Simpson, P.P.R.I.B.A., was good enough to show his confidence in this work by becoming Chairman and taking an active interest in its educational policy.

Under these favourable auspices the Atelier has made steady progress, and during the eight months under review, of which nearly one-half covered the summer months, the internal working of the Atelier has been reorganised, and the nucleus of half-a-dozen Students increased to twenty, and there is every indication that the Atelier will be working at full capacity in the near future.

This Atelier is one of a group of Royal Academy Ateliers in London, each retaining its autonomy, but having its conditions of entry, system of education and scale of fees standardised. Full details of the scope and objects of the Atelier have been published in the Society's *Journal*.

BRANCHES.—During the year an Indian branch of the Society has been established with headquarters in Bombay, and all the necessary formalities have been completed for its organisation.

MR. G. H. WENYON, a member of the Home Council, who was in India on professional business, took an active part in the promotion and formation of the Branch, whose first general meeting was due to be held in October, 1921.

PUBLICITY.—The Society continues its policy of securing the widest possible publicity for architects and architectural matters in the public press, as well as in the professional journals. The lead it took some years ago in this direction, as in others, has resulted in other bodies adopting a similar policy, which is all to the good of architecture.

BUILDING EXHIBITION, OLYMPIA.—The Society joined with the R.I.B.A. and the A.A. in organising the Architects' Welcome Club at Olympia in April, 1921, the arrangements being on a more extensive scale than before, and including a number of public lectures and an exhibition of drawings from several of the Architectural Schools and Ateliers.

The Council have held eleven meetings and there have been forty-seven meetings of Committees and eleven ordinary meetings for the transaction of the Society's business.

VISITS TO WORKS, ETC.—At the invitation of the Master (MR. ALBERT E. PRIDMORE, P.P.S.A., F.S.ARC.) and the Court of the Worshipful Company of Painters and Stainers, a party of members visited the Hall of the Company and were most hospitably entertained. Visits were also paid to the Hop Exchange and various works thrown open to the inspection of members by the courtesy of the Directors.

SOUTH AFRICAN BRANCH.—The Annual General Meeting was held at Johannesburg on October 27th, 1921, when MR. ALLEN WILSON was elected President; MESSRS. J. F. BEARDWOOD, FRANK SCOTT (Bulawayo) and F. T. ING (Durban), Vice-Presidents; MR. H. G. VEALE, Hon. Secretary; and MR. D. M. SINCLAIR, Hon. Treasurer. The statement of account shows a debit balance for the year of £13 18s. 9d., but it should be noted that a sum of £85 moiety of subscriptions, since remitted to the Branch, was not to hand when the accounts were made up. The report, which will be published in the *Journal*, shows that the activities of the Branch continue to be exercised in maintaining the interests of architects and architecture in the Union of South Africa.

BUILDING INDUSTRIES CONSULTATIVE BOARD.—As the Institute of Builders and the National Federation of Building Trades Employers decided to withdraw their representation, the Council of the Board considered that no useful purpose would be served by the continued existence of the Board with representatives of the Employers, and intimation of this was sent to the Society, as one of the constituent bodies, together with an expression of appreciation of the services given by the Society's representatives.

R.I.B.A. BOARD OF EDUCATION.—In response to an invitation to nominate a member of the Society for appointment as an Advisory Member of the Board, the Council nominated MR. L. SYLVESTER SULLIVAN to represent the Society.

HONOURS.—SIR CHARLES T. RUTHEN, O.B.E., F.S.ARC., President, has been appointed Director-General of Housing under the Ministry of Health.

MR. REGINALD C. FORD, F.S.ARC., has been elected President of the New Zealand Institute of Architects, MR. H. C. PORTSMOUTH, F.S.ARC., President of the South Wales Institute of Architects, and MR. ALLEN WILSON, F.S.ARC., President of the South African Branch of the Society.

A.S.A.P. UNION.—The attitude of the Council of the Society and other interested bodies on the proposals of the Union for a minimum wage were made clear at a meeting of the Assistants' Welfare Committee as a result of which the Union undertook further to consider the matter. The Council supported the Union in requesting the Ministry of Labour that unemployed architects' assistants should be given work on the preparation of plans, etc., in connection with any public works undertaken by the Government as relief measures, and also agreed to take part in any conference which might be called to enquire into the causes of overcrowding in the architectural profession.

REPRESENTATION AT CONFERENCES.—By invitation of the several organisations, the Society appointed representatives to the following conferences:—

NATIONAL HOUSING AND TOWN PLANNING COUNCIL CONFERENCES IN LONDON AND THE PROVINCES; ROYAL INSTITUTE OF PUBLIC HEALTH CONGRESS, LONDON; PUBLIC WORKS, ROADS AND TRANSPORT CONGRESS, LONDON; ROYAL SANITARY INSTITUTE CONGRESS, FOLKESTONE.

REPRESENTATION ON OTHER BODIES.—The Society is represented on the following organisations:—

THE R.I.B.A. UNIFICATION COMMITTEE, THE COUNCIL OF THE ARCHITECTS' BENEVOLENT SOCIETY, THE-BUILDING INDUSTRIES' CONSULTATIVE BOARD, BUILDING TRADES' PARLIAMENT, ASSISTANTS' WELFARE COMMITTEE, ARCHITECTS' AND SURVEYORS' APPROVED SOCIETY, MINISTRY OF LABOUR APPOINTMENT BOARDS, PROFESSIONAL CLASSES AID COUNCIL, BEAUX ARTS COMMITTEE, ROYAL ACADEMY ATELIER COUNCIL, JOINT CONFERENCE ON CIVIC SURVEYS, R.I.B.A. BOARD OF EDUCATION, R.I.B.A. CONDITIONS OF CONTRACT COMMITTEE, ARCHITECTS' AND SURVEYORS' ASSISTANTS' UNEMPLOYMENT INSURANCE COMMITTEE.

GENERALLY.—The Council's report does not purport to give more than a brief summary of the Society's work during the year under review, and much of the result of it has been published in the *Journal* from time to time, for the information of Members. Progress in every department is indicated and the possibilities of further development of its activities in the future.

Papers for Session, 1921-22.

The Council of the Society invite offers of or suggestions for papers on questions of professional interest for the forthcoming session. The invitation is not confined to Members of the Society, and is extended to the members of allied arts, crafts, sciences and industries.

The meetings are held at 8 p.m., at the Society's Headquarters, 28, Bedford Square, W.C.1, on the second Thursday in the month.

The Society of Architects' Revenue Account and

REVENUE ACCOUNT.

1920.		1921.		1920.		1921.	
£		£	s. d.	£		£	s. d.
To Expenses—				By Subscriptions—			
225	General	267	10 9		Fellows	747	12 0
124	House Mainte- nance	135	9 1	2,550	Members	3,565	16 0
173	Postages	156	19 5		Licentiates	222	12 0
486	Printing and Stationery	588	15 10	55	Students	114	9 0
264	Rent, Rates and Taxes	324	5 10	12	Graduates	-	-
	Repairs	334	9 4				
1,451	Salaries	1,539	8 5				
286	Commission	400	14 6				
31	Legal	25	14 4				
			5,819 7 2				4,650 9 0
„ Publications—				„ Publications—			
1,367	Printing and Postages, <i>Journal</i>	1,513	1 8		Advt. and Sales, <i>Journal</i>	1,049	2 0
318	Printing and Postages, <i>Year Book</i>	397	17 5	886	Advt. and Sales, <i>Year Book</i>	489	0 9
			1,910 19 1				1,538 2 9
	„ Victory Scholarship & other Prizes	248	14 6				
	„ Examination Expenses	85	12 1				
193	„ Building Exhibition, Olympia	39	18 1	22	„ Examination Fees	95	9 0
40	„ South African Branch	85	16 9	63	„ Interest on Investments	92	14 4
119	„ Social Functions	-	-	59	„ Social Functions	-	-
62	„ Leasehold Redemp- tion Sinking Fund	105	0 0	50	„ User of Rooms	50	0 0
128	„ Depreciation of In- vestments				„ Deficit—		
	„ Donations			1,199	Transferred to Balance Sheet	109	2 7
	(Educational)—						
	Architectural Association	70	0 0				
	First Atelier	100	0 0				
	(Benevolence)—						
	Architects' Benev- olent Society	10	10 0				
41		180	10 0				
	„ War Memorial Tablet	57	0 0				
5,308		£6,555	17 8	£5,208		£6,555	17 8

We have audited the above Balance Sheet with the books of the Society, and have obtained all the information and correct view of the state of the Society's affairs according to the best of our

Balance Sheet for the Year ended 31st October, 1921.

BALANCE SHEET.

1920.	1921.	1920.	1921.
£	£ s. d.	£ s. d.	£ s. d.
	Sundry Creditors—		Leasehold Premises
	Subscriptions and		as at 31st Oct., 1920...
896	Entrance Fees		3,288 9 9
	paid in Advance		„ Additions to Premises
210	242 5 6		125 10 0
	Sundry		5,413 19 9
	344 8 11		Less Sinking Fund...
			291 0 0
	586 14 5		
365	„ Professional Defence	3,102	3,122 19 9
	Fund		
	375 0 0		„ Furniture and Fittings
606	„ Victory Scholarship		as revalued at 31st
	Fund		Oct., 1919
	708 4 1		1,600 0 0
86	„ Trehearne-Nor-		„ Additions to date ...
210	man" Prize Fund		198 10 3
	91 10 0		
	„ Beaux Arts Fund a/c		
	- - -		
		1,664	1,798 10 3
	„ Surplus—	291	„ Library
	Balance as on 31st		228 0 5
5,394	Oct., 1920		„ Stock of Stationery...
563	8,075 15 7		9 10 0
397	Entrance Fees ...		
	477 15 0		„ Sundry Debtors—
6,284	Premises a/c		Members
	5,553 10 7		323 2 6
			Students
10	Less Professional		33 12 0
	Defence Fund		Advertisers
6,274	10 0 0		171 15 8
	5,513 10 7		Sundry
			63 7 5
	Less Deficit for		591 15 7
1,198	year as per an-		Less Reserve for Bad
	nexed Account		Debts... ..
	109 2 7		255 19 10
5,076		253	355 15 9
	5,434 8 0		
			„ Professional Defence
			Fund Investment
			a/c at cost—£268
			18s. 8d. Met. Consol.
			Stock at 50½
			288 0 5
			£100 War Loan 4½%
			at 77½
			77 10 0
			365 10 5
			„ Victory Scholarship
			Fund Investment
			a/c at Cost—£722
			17s. 10d., 5% War
			Loan at 83... ..
			600 0 0
			„ "Trehearne-Norman"
			Prize Fund Invest-
			ment a/c at Cost—
			£200 Annuities
			at 43½
			86 10 0
			„ Leasehold Redemption
			Fund—
			(War Savings
			Certificates)
			186 0 0
			„ General Investments—
			£127 2s. 8d. 5% War
			Loan at 85
			105 10 0
			£200 Victory Loan
			at 74
			148 0 0
1,414			(Market Value
			£267 7s. 7d.)
			255 10 0
			„ Cash—
600			Deposit
			100 0 0
212			Current
			95 8 10
3			Petty Cash
			14 1 3
			209 10 1
7,449	£7,195 16 6	£7,449	£7,195 16 6

explanations we have required. In our opinion such Balance Sheet is properly drawn up so as to exhibit a true and information and the explanations given us and as shown by the books of the Society.

WM. HOE, Hon. Auditor.

BOLTON, FITT and BREDEN, Auditors.

The President of the South African Branch.

Mr. Allen Wilson, F.S.Arc., the newly-elected President of The Society of Architects' South African Branch, is a Londoner and was educated in Cheltenham, and after a period of professional training, he carried out various ecclesiastical, scholastic and private buildings in Cheltenham and neighbourhood and was associated with all the architectural work at Cheltenham College for many years. Subsequently he practised in London and district. Mr. Wilson served through the Boer War in command of the Mounted Infantry, resigned when peace was declared, and has been in practice in South Africa ever since. He has been successful in a number of competitions and carried out numerous works, principally in Johannesburg, including a large mansion outside Johannesburg for Mr. P. W. Tracey, and the Queen Victoria Hospital for Women, each costing over twenty thousand pounds; new buildings for the Standard Bank of South Africa, Limited, now nearing completion, at a cost of nearly one hundred thousand pounds; several large business premises in Johannesburg; innumerable residences in the suburbs; business premises in Delagoa Bay and in Pretoria; and is just completing buildings for the Johannesburg Turf Club; large business premises for the Elephant Trading Company; and is starting a seven-storey building for Messrs. M. Bloch and Company, Merchants, in Johannesburg.

The Architect and the State.

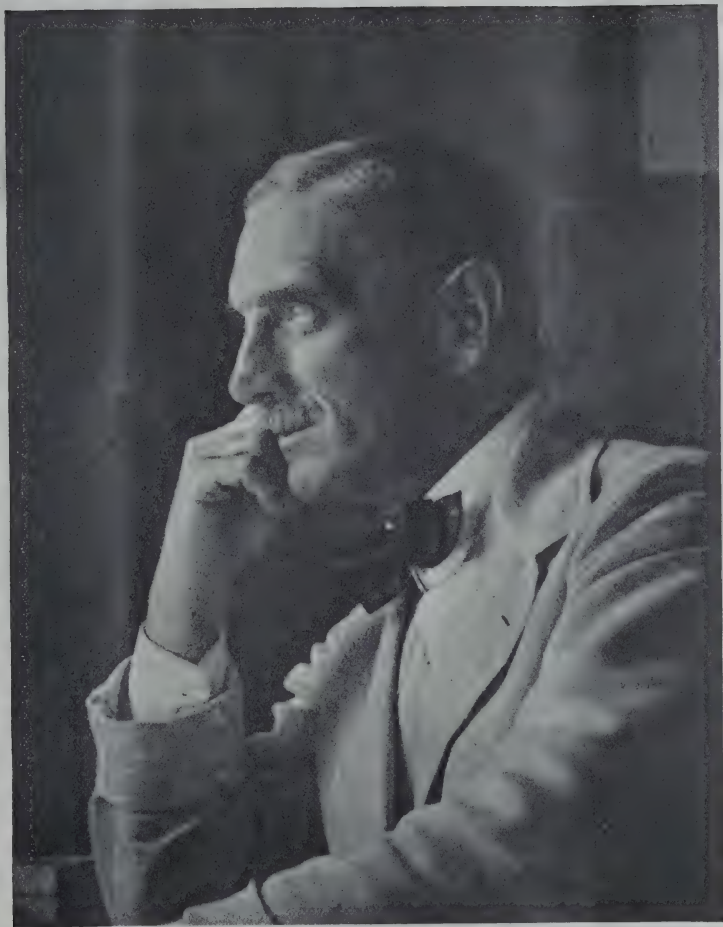
The Council of the R.I.B.A. passed the following resolutions on the subject at a meeting on January 23, 1922:—

(1) That regarded as the utterance of the President of The Society of Architects, this Council considers that it has been adequately and appropriately dealt with by the Council of the Society.

(2) If it may be viewed as the utterance of a Government official, the opinion of this Council is that it is an undignified departure from the best traditions of the Civil Service, as well as an unwarranted attack from an official quarter upon a whole profession whose interests the R.I.B.A. is pledged to protect, and those in higher authority are invited to give consideration to it.

(3) That though the charges are so general, and expressed with so much animus as to be unworthy of serious attention, the Council, in view of the fact that they were the utterances of a Fellow of the Royal Institute, has called upon Sir Charles Ruthen either to present to the Council such definite allegations as will enable it to take its own proper action, or to tender a complete withdrawal.

Resolutions protesting against Sir Charles Ruthen's statements passed by the South Wales Institute of Architects and the Gloucestershire Architectural Association, have been received by the Society.



ALLEN WILSON, F.S.A.R.C., PRESIDENT OF THE SOUTH AFRICAN BRANCH
OF THE SOCIETY OF ARCHITECTS, JOHANNESBURG, 1921-22.

The Society of Architects South African Branch.

THE Annual General Meeting of The Society of Architects, South African Branch, was held at the Associated Scientific and Technical Club Buildings, -Fox Street, Johannesburg, on Thursday, the 27th October, 1921, when the Minutes of the last Annual General Meeting held on the 15th November, 1920, were read and confirmed, and the Balance Sheet was adopted.

Mr. J. S. DONALDSON, the retiring President, then delivered a valedictory address, in the course of which he said they were striving for Registration with the full sympathy of the parent body. He had no idea as to what was taking place in England in regard to the unification of the Architectural bodies there. One could fairly assume that the movement was primarily to place the Royal Institute of British Architects and The Society of Architects, and other Architectural bodies on the same plane. That seemed to him the only proper course to adopt (with success) in order to go to Parliament as a united body for a Registration Bill for the whole of the British Empire, providing for all the different bodies to be absorbed into the Royal Institute (naturally with protective rights to members of the other bodies) which would then be the legally constituted body controlling all the Architects of the British Empire. One could foresee what a portent for good to the profession, and protection to the public, such an institution would mean, and he hoped this much desired Act would soon be consummated.

During the year a deputation from the Council visited the Trades School at Johannesburg, in which many trades are installed including the building trades, in an admirable building well equipped with ample teaching and class rooms. The deputation was very disappointed to find so few lads taking advantage of such a splendid opportunity of learning the building trades under ideal conditions at such a very small cost. It is surprising that so few parents take advantage of these trade schools. The inference is that the boys' future is sacrificed for the temporary benefit to the parents whom he assists in supporting from his earnings as an apprentice.

It was particularly noticeable that the engineering and allied trades seem to be most attractive to parents and boys alike in spite of the fact that many more lads are being trained for engineering and other trades than have any prospect of being absorbed in this particular branch of industry—whereas the building trades are capable of absorbing skilled men for years to come. The building industry was slack at present but he was convinced that the present depression was only temporary and that a great improvement and revival of the building trade was imminent in the near future.

There was held at Johannesburg on the 5th September, 1921, a conference of Architects in South Africa of very great importance to the Profession. The conference was held under the auspices of the Association of Transvaal Architects and under the Chairmanship of the President of the A.T.A., Mr. E. M. Powers. Representatives from every part of the Union and Rhodesia were present and the Society was represented by Mr. J. F. Beardwood and himself. Registration and Builders conditions of contract were the chief matters discussed. With respect to a Union Bill for Registration there was perfect unanimity. It was felt that the Draft Act which was prepared by the Association of Transvaal Architects some years ago, with the help of the members of the Society, should be adopted and proceeded with. The representatives from various centres were appointed as an Executive, and Mr. R. Howden was nominated to represent the Branch Council. Mr. Howden and Mr. Harris who will

represent the A.T.A. were delegates to the Cape Conference which took place at the Cape some time ago and are *au fait* with all matters in connection with Registration. Johannesburg was selected as the centre for the Executive to meet. It is earnestly hoped that in the course of a few months it will be possible to present a Union Registration Bill to Parliament. The next important matter discussed by the Conference was a uniform set of conditions of building contracts. Representatives of the Building Trades being present it was unanimously agreed that a draft set of conditions should be issued and, when approved, printed for the adoption of all members. A few Social functions took place during the days the Conference was sitting, visits to various works in progress were made such as the University Building, Medical and Research School, Hospital, Chamber of Mines, New Standard Bank, and Country Club, and on the 9th a Banquet was held at which His Honour the Administrator, his Worship the Mayor and Mayoress, and other notable persons attended. The Society contributed £20 towards the funds.

Referring to the Victory Scholarship, Mr. Donaldson stated that the branch had not been able so far to contribute to this very necessary fund, owing to the many other calls upon their resources, but there was no doubt as to the value of the Scholarship to their profession. Apart from the worthy aim of the commemoration of those brave and unselfish men of their craft who gave up their lives in the war, the idea of the living revering the spirit of a dead confrere in assisting the training of a brain to perhaps build up some of the destroyed architecture of the war, was a noble and good one. The fund was not for the Society but architecture generally, and members should make every endeavour to subscribe and not be diffident in approaching their friends for their support for such a worthy object.

The branch has become associated with the recently formed Town Planning Association because Town Planning embraced many side issues apart from actual architecture and was essentially an Architect's work in conjunction with other interested professional bodies such as Doctors and Land Surveyors. Three members of the Branch Council are on the Executive of the Town Planning Association.

For some years past the Branch has encouraged students at the Technical College by offering prizes in Architectural subjects. This year in view of a Chair of Architecture having been established at the Johannesburg University the Branch has given Fifty Guineas to the University as a Bursary to be earmarked "The S.A. Branch of The Society of Architects (London) Bursary" which it is hoped they may be able to repeat annually and, if possible, when occasion arises, to augment the amount or establish further bursaries. The establishment of a Chair of Architecture at Johannesburg had been greatly assisted by The Society of Architects whose members were continually striving for reform and attainments and for the betterment of their profession.

In the establishment of the Chair they must not overlook the great endeavours made by the Association of Transvaal Architects towards that end by which South African youths, whether Dutch or English, could be trained in the profession of Architecture. He hoped the Dutch youth of the country would avail themselves of the opportunity as undoubtedly there was imaginative talent among them as shown by the examples of Dutch architecture at the Cape left them by their forefathers. The Government and the public generally should encourage the profession of architecture as well as that of medicine seeing that they open up a field for both races which may in a small measure help to solve the racial question.

It is perhaps a matter of regret that the Professor of Architecture is not a member of the Society. He is an Associate of the Royal Institute of British Architects, but it should be borne in mind that in the appointment of the Professorship,

distinguished members of the Branch were consulted and their views had great weight in the appointment. The Branch Council feel that the very best selection for the Professorship was made and that in Mr. Pearse the University have not only a learned and cultured Architect, but a young and enthusiastic teacher, so that in the future years they might hope to see established there a virile school of Architecture, perhaps equal to the British, French or American Schools.

All the Architectural bodies were invited to help and contribute to the endowment of a cot in the Children's Hospital which is being erected as a War Memorial at Milner Park, Johannesburg, and the Branch Council donated 25 guineas to the fund.

Fifteen members have applied through the branch for transfer to Fellowship of the Society, most of whom the Council have been able to recommend. The Society has set a very high standard for the Fellowship status and the branch realise that recommendations for admission to the Fellowship is not a light matter, and that only architects of the highest merit and probity should be admitted to that class. While on this subject, Mr. Donaldson stated that the branch was now able to carry out examinations locally, and it was necessary for their young men to understand that these examinations were available.

The second exhibition of Arts and Crafts of the S.A. Academy had been held this year and was a success, and it was proposed to hold the Third Exhibition in April next. He hoped their members would again contribute to its success by sending exhibits of works of Architectural merit.

It is gratifying to be able to report that the headquarters for the housing of the Association of Scientific and Technical Bodies was an accomplished fact, and he congratulated their Past President, Mr. D. M. Sinclair, on his election as Vice President; to him much of the success was due.

A hearty vote of thanks was accorded to the retiring President, Mr. J. S. Donaldson, who then inducted Mr. Allen Wilson, the newly elected President, into the chair, and congratulated him on having been unanimously elected to so important an office as President of the South African Branch of the Society of Architects.

The election of Honorary Officers and Council was then proceeded with, and the following were declared to be duly elected:—Vice Presidents, MESSRS. J. F. BEARDWOOD, FRANK SCOT, F. J. ING; Hon. Secretary, MR. H. G. VEALE; Hon. Treasurer, MR. D. M. SINCLAIR; Council, MESSRS. D. M. BURTON, R. HOWDEN, M. J. HARRIS, and J. S. DONALDSON (ex officio).

The President, Mr. Allen Wilson, then delivered his inaugural address, in the course of which he spoke of the proposed amalgamation of the different Architectural bodies in Great Britain, pointing out the immense difficulties in a proposal which was somewhat on a par with what the Transvaal Architects did in 1909, when they obtained the protection of the Government, under the Architects' Private Act in the Transvaal, but whatever was done the South African Members of The Society of Architects might be assured that their privileges would be zealously guarded by himself and the Council.

The funds of the South African Branch had been depleted owing to the liberal donations toward the establishment of Chair of Architecture in South Africa, and other objects for the furtherance of the Architectural Profession and interest of Students in particular.

Touching on the "New Registration Bill," he trusted it would be completed during his year of office, and that Architects would then be under one administration for the general good.

The New President congratulated the profession generally of South Africa on the good work which was being done, as could be seen by the many beautifully designed buildings being erected throughout the country, and stated that South African

Architects were justly entitled to claim that the designs would compare favourably with work in England or any other part of the world, and mentioned that this improvement was, to a certain extent, attributable to the better class of workmen and better material.

He also congratulated the Profession on the excellent work done at the conference held in Johannesburg last year, and the good understanding which was shown between the Architects and the Master Builders' and Allied Trades' Association, in arriving at a satisfactory "Condition of Contract" shortly to be issued by the Association of Transvaal Architects.

Speaking of the Town Planning Association, he referred in particular to the interest taken in the matter by Mr. D. M. Burton, Past President of the South African Branch of the Society. He regretted that the Council were not able to give to the Victory Scholarship, but as it should be supported if possible, he suggested that some of the Members might like to make a donation which would be received thankfully, and passed on to the Parent Body.

In conclusion he congratulated the Branch on retaining the services of the Hon. Secretary, Mr. Veale, and the Hon. Treasurer, Mr. Sinclair, and spoke of the excellent work done by these Members in the past.

Mr. S. C. Dowsett was re-elected Hon. Auditor, and received a hearty vote of thanks for his past services.

A resolution was passed supporting the action of the Associated Technical and Scientific Societies in approaching the Government with a view to raising the status of its Technical Officers.

That a copy of this resolution be forwarded to the Prime Minister, the Chairman of the Public Service Commission and to the Associated Technical and Scientific Society, and offered evidence to be given by the Society to the Commission in regard to the Architectural Staff.

A hearty vote of thanks was accorded to the retiring President, Honorary Officers and Council, and the proceedings terminated.

BALANCE SHEET for Year, October 1st, 1920, to September 30th, 1921.

	£ s. d.		£ s. d.
To Balance October 1st, 1920	144 12 9	By Fellowship Subscriptions from South African Members forwarded to London including Exchange	25 13 0
„ Subscriptions received from South African Members for Fellowship Class... ..	25 5 6	„ Grant to Witwatersrand University toward Chair of Architecture	52 10 0
		„ Grant for Prizes to Students	9 6 0
		„ Grant to Children's Memorial Hospital towards Architects' Memorial Cot	26 5 0
		„ Subscription to Town Planning Association for Year 1921	3 3 0
		„ Grant towards expenses of Architects' Conference, held at Johannesburg, September, 1921	20 0 0
		„ Hon. Secretary's Disbursements... ..	12 5 0
		„ Agreed Rent A.T.A. Office for year 1921	5 0 0
		„ P.O. Box 5062, rent for year 1921	1 5 0
		„ Bank Charges	12 6
		„ Balance 30th September, 1921	13 18 9
	<u>£169 18 3</u>		<u>£169 18 3</u>
		BANK RECONCILIATION:	
To Balance September 30th, 1921	13 18 9	Sept. 30th, 1921. By Balance at Bank	38 2 9
		By outstanding cheques ... £20 0 0	
		„ „ „ ... 4 4 0	24 4 0
	<u>£13 18 9</u>		<u>£13 18 9</u>
Examined and found correct.		JOHN S. DONALDSON, <i>President</i> ,	
S. DOWSETT, <i>Hon. Scrutiner</i> ,		D. M. SINCLAIR, <i>Hon. Treasurer</i> ,	

Reviews.

ARCHITECTURAL OFFICE ADMINISTRATION. By Francis Lorne, A.R.I.B.A.; London: Technical Journals Ltd. Price 5/3 Post Free.

Driving method into the average British architect's mind is like driving a nail into an old plaster wall without plugging it first. The nail holds for a time; but upon application of stress the whole disintegrates and things are worse than when one started.

Mr. Lorne's book is an admirable "plug," and it may be that using it in this way, many an architect's office will be the better for its publication:—but, we fear, the very men who ought to read this excellent work will not do so, hence the author cannot expect its influence to be perceptible until the present generation of very eminent architects has ceased to function.

W. N. ADAMS.

DRAWING FOR ART STUDENTS AND ILLUSTRATORS. By Allen W. Seaby; London: B. T. Batsford Ltd. Price 12/- net.

A great number of books on the Fine Arts are wholly or partially marred to the practical student by their ignorance of his immediate difficulties. Mr. Seaby does not write in the manner of a stylite saint meditating in eclectical solitude, and the most elementary problems which torment the beginner find very adequate consideration in his little book.

We hesitate to touch upon a still rarer quality evident in his approach of the subject, because it can only be named by perverting a famous *mot* of Whistler's. The reader is left with the realization that it is vastly more difficult, not to say more important, to learn to see what one draws than to learn to draw what one sees. This is indeed the most valuable lesson of a book which, despite several defects, has the double appeal of its own merit and that of its excellent reproductions of a number of drawings of the Masters, some of which (one by Rubens, for instance, and one by Guercino) are not as widely known as they deserve to be.

B.

EVERYDAY LIFE IN THE OLD STONE AGE. By Marjorie and C. H. B. Quennell; London: B. T. Batsford Ltd. Price 5/- net.

We have only the scantiest evidence, in the introduction, that this book aims at a similar appeal to that of its popular predecessors on historical life in England. Yet its less ambitious format, too, makes it appear more congenial to the adult traveller's pocket than to the latter's cherished place on the nursery shelf. Clearly all this charming and easy talk about prehistoric man, despite its charm and its ease, is not really intended for children at all, since every child is itself an excellent prehistoric man, and cannot very reasonably be expected to listen to an archaeological approximation of ideas and methods which are as familiar to it as twentieth century ideas and methods are to most of us. That by its treatment of the subject the book remains astonishingly readable and interesting to the mere adult is quite another aspect of the matter, which, however, deserves no less to be emphasized. He could, in fine, do worse than make a present of it with a view to surreptitious perusal.

B.

THE SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS. Forty-fourth Annual Report. A. R. Powys, Secretary, 20, Buckingham Street, Adelphi, W.C. Price 2s.

If any person still remain ignorant of the purpose of this active and scholarly Society, let him read, on page 3 of the present report, the admirable piece of English prose in which its principles have been laid down since the years when Ruskin and Morris raised their voice against the desecration and destruction of important historical records that daily went on around them. It is necessary, however, for him to realise that, while a Lytton or a Hugo may give his imagination full freedom without impairing the actual records in which history survives to us, the restorer must efface these records (and the less there is of them the more inestimable they become) before he can begin his own emulative work.

An idea of the magnitude of the business undertaken by the Society in advocating repair in place of such restoration may next be gathered from the list, extending over six double-column pages, of buildings which have come before it during the year. The more remarkable of these are described elsewhere in the pamphlet.

B.

Annual Dinner Postponed.

The Annual Dinner of The Society of Architects, which had been fixed for February 22nd, 1922, has been postponed *sine die*. A further announcement on this subject will be made in due course.

Membership (2 b) Examination.

The next Examination to qualify for candidature for Membership of the Society will be held in October next in London and other centres. Entries close on September 1st. Candidates who take the whole examination are eligible to compete for awards of the total value of over £180.

The examination Fee for Licentiates and Students of the Society is £2 2s. and for other candidates £4 4s.

A Syllabus and Entry Form may be obtained from the Secretary at 28, Bedford Square, W.C.1.

The Loan Library.

Members who are in possession of overdue books from the Society's Loan Library, and who have not received a personal reminder, are requested to return such books at their earliest convenience. The re-arrangement and re-cataloguing of the volumes is practically completed, and the attention of members of the Society, especially of those in the provinces, is directed to the facilities afforded by the Loan Library.

Members may obtain books on loan either personally or through the post. In the latter case the books are despatched at the cost of the Society, and returned at the cost of the borrower.

A list of the additions to the 1914 catalogue is in preparation.

The following books have recently been presented to the Library—

DRAWING FOR ART STUDENTS AND ILLUSTRATORS. By Allen W. Seaby; 8vo; London: B. T. Batsford, Ltd.

THE ART OF DRAWING IN LEAD PENCIL. By Jasper Salwey; 8vo; London: B. T. Batsford, Ltd.

HOMEWORK AND HOBBYHORSES (No. VI. of the Perse Playbooks). Edited by H. Caldwell Cook; London: B. T. Batsford, Ltd.

LIFE IN THE OLD STONE AGE. By Marjorie and C. H. B. Quennell; London: B. T. Batsford, Ltd.

SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS, London. 44th Annual Report, with an Address by Miss Lena Ashwell.

BUILDING RESEARCH BOARD. Special Reports Nos. 2, 3, and 4 relating to Floors, the Stability of Thin Walls, and the Transmission of Heat and Gases through, and the Condensation of Moisture on, the Surface of Wall Materials respectively.

BRITISH FIRE PREVENTION COMMITTEE, Booklet No. 258. The Fire Resistance of Concrete and Reinforced Concrete. Compiled by D. W. Wood, M.B.E., A.J.Inst.E.

A complete set of the Photogravure reproductions of W. Walcot's Roman compositions has been presented to the Society by Mr. Sylvester Sullivan.

The Late Ernest Newton, R.A.

At a Meeting of the Council of The Society of Architects held on January 26th, 1922, the following resolution took precedence of all other business:—

"THAT THE COUNCIL OF THE SOCIETY OF ARCHITECTS DEPLORE THE DEATH OF MR. ERNEST NEWTON, AND DESIRE TO EXPRESS THEIR SENSE OF THE LOSS OCCASIONED THEREBY TO ART IN GENERAL AND TO THE ART OF ARCHITECTURE IN PARTICULAR, AND ALSO THEIR APPRECIATION OF HIS PERSONAL AND PROFESSIONAL QUALITIES, AND HIS INVALUABLE SERVICES TO ARCHITECTURE AND TO THE COMMUNITY."

Unemployment Insurance Act, 1920.

The Unemployment Insurance Act of 1920 provided for the compulsory insurance of every assistant with a salary of less than £250 per annum, and for the administration of the Act by the Labour Exchanges. There were obvious objections to this procedure from the professional standpoint and in May, 1920, when the Bill was before the Standing Committee of the House, a deputation from the Architects and Surveyors Assistants Professional Union waited on Major Barnes, M.P., F.R.I.B.A., M.S.A., F.S.I., to discuss what steps could be taken to protect the interests of the members of the two professions.

Major Barnes suggested that upon the Bill becoming law, steps should be taken to obtain the Minister's approval to a "Special Scheme" under Section 18 providing for the administration of the Act so far as it related to Architects and Surveyors to be in the hands of the Professions instead of the Labour Exchanges and for any financial advantage derived from such administration and from the better class "lives" included in the Special Scheme, to be enjoyed by the Profession in the form of reduced contributions and increased benefits.

This course was adopted and on November 1, 1920, a meeting was held at the Architectural Association attended by Representatives from the Royal Institute of British Architects, Surveyors Institution, Society of Architects, Architectural Association, Architects and Surveyors Approved Society and the Architects and Surveyors Assistants Professional Union, who appointed a committee of six, one representative from each body, with the addition of Mr. Yerbury as Secretary, to work out the details and, with the assistance of Sir Kingsley Wood and his partner Mr. Williams, a scheme was completed and submitted to the Ministry of Labour where the matter now rests, as under the Unemployment Insurance Act of 1921 no Special Schemes will be approved by the Minister until the Government scheme is solvent.

Briefly the Scheme as drafted will apply to all persons engaged in the professions of Architecture and Surveying, and will be administered by a body representing employers and employees.

Every employed person within the meaning of the Unemployment Insurance Act, 1920, and every employer of such person in the Professions will be liable compulsorily to pay the contributions now payable under the Unemployment Insurance Act, 1921, and the benefits at the start will be £1 per week for men and 18s. per week for women, but it is hoped that in due course it will be possible to reduce the contribution and increase the benefits.

The Scheme provides for the establishment of an employment register and for the method of payment of unemployment benefit.

All other necessary details, with regard to management, administration, claims, penalties, returns, determination, legal proceedings, trustees and other officials are provided for in the Scheme.

Professional Prospects Overseas.

From information received from what we regard as reliable sources we think it desirable to warn members who may be contemplating emigration that the professional unemployment problem is no less acute in the Union of South Africa and in New Zealand than it is at home. Further, the cost of living is very high, and there is the cost of transport from the Coast Ports to consider if an inland centre is the objective.

No architect should proceed overseas with a view of establishing a practice or obtaining employment unless he has sufficient capital to make him independent of work for a considerable period, nor should he enter into a contract at home for employment overseas without being sure that he is dealing with a person who is competent to bind his principal or department, and that the salary is at least sufficient to provide a living wage.

The Secretary of the Society will be glad to give what further information he can to any members who may be interested.

Antiquated Building Regulations.

The feeling that we are building under antiquated regulations was expressed on Tuesday by Mr. C. McArthur Butler, the secretary of The Society of Architects, in conversation with a representative of the "Times." Mr. Butler pointed out that the present arrangements were made at a time when security against fire, for example, was nothing like so adequate as it now is. Nobody would advocate putting up tall buildings wholesale, but where there was a fair amount of space, so that light and air could get through, many of the old objections no longer held. "I do not like the term 'skyscraper,'" said Mr. Butler. "It suggests that you are going to build something extraordinary. 'Higher buildings' is better, because it indicates simply the advisability of revising the regulations to meet the demands of the age. No doubt there must be a limit, but really it depends on the character of the site. Though I cannot speak for architects generally, I cannot understand any architect, from the architectural point of view, objecting to higher buildings in their proper place." With reference to the Bank of England, in particular, Mr. Butler said that, of course, the sketch was but a suggestion. He did not know whether this site was ideal for carrying it into practice. It might be that the Royal Exchange and the Mansion House would be overshadowed to some extent. On the other hand, there appeared plenty of light in the immediate neighbourhood. Problems of this kind—and there were all sorts of them—would inevitably be considered by an architect before he decided on the height of his building. What was wanted was greater liberty to deal with conditions as they arose; and he was glad to see that the "Times" was insisting on the utilitarian and the artistic sides of architecture being combined. So are we, and so will property owners, tenants, and others be if the conditions insisted on by the "Times" are observed, as endorsed by Mr. C. McArthur Butler.—*The Building News*.

Mr. McArthur Butler, Secretary of The Society of Architects, renders a useful service in pointing out how misleading is the use of the term "skyscrapers" in this connection; he advocates employment of the description "Higher Buildings for London," a phrase first used by me in the first letter I addressed to you on this subject in January, 1920.—*Dellissa Joseph, F.R.I.B.A., in The Times*.

Competitions Barred.

MALVERN PUBLIC BATHS, WHITTLESEA AND TRURO WAR MEMORIALS,
SEAFORD LAY-OUT AND TRUJILLOS STATUE (PERU) COMPETITIONS.

Members of The Society of Architects are notified that the conditions of these Competitions do not comply in essential respects with the Competition Regulations, and they are requested not to take part in them without first ascertaining from the Secretary that the conditions have been approved by the Council of the Society.

Reviews.

The Editor will be glad to hear from any members who will occasionally undertake to review books for the Journal. It will be convenient if those who are able and prepared to do so will state their preference for works of an historical or technical nature.

New Membership Certificate.

By-law 5.—Members elected previous to June, 1920, who desire to exchange their certificates for the new form of membership certificate issued since that date may do so on returning their original certificate to the Society and paying a fee of five shillings.

Such certificates shall bear the original date of election, but the signatories will be the officials of the Society for the time being empowered to sign such certificates.

The Atelier.

This Atelier is one of the Royal Academy Ateliers, and membership of it confers a distinction which is valued by those who are acquainted with the qualifications of the Patron, who regulates admission. There are at present a few vacancies, and those who desire further information should apply, preferably personally, to the Patron, M. Chaires, at the Atelier, or to the Hon. Secretary, at 28, Bedford Square, W.C. 1.

Notices.

By-law 51. A member (in any class) shall be deemed to have knowledge of any by-law, regulation, rule, announcement or other notice issued by the Society or by the Council and published in the Journal as if the same had been served separately and personally or by post upon such members, but in all matters affecting the alteration of the Society's Articles of Association notice shall be sent to all members as provided by Articles 68 and 69 of the Society's Articles of Association.

Masonic Lodge.

A Meeting of the Society of Architects Lodge, No. 3244, will be held at the Holborn Restaurant on Wednesday, March 8th, at 5 p.m. Members who belong to other Lodges, and wish to visit the Society's Lodge, are invited to communicate with the Secretary at 28, Bedford Square, London, W.C.1.

The Society of Architects.

Sessional Arrangements, 1922.

Subject to additions and revisions of which notice will be given in the Journal.

Feb. 2	Practice Committee 3.30 p.m.	June 3	Victory Scholarship Competition, Part I.
" 8	R. A. Chapter 5 p.m.	" 5	Whit Sunday.
" 9	Council 4 p.m.—Ordinary Meeting 6 p.m.	" 6	Bank Holiday.
		" 8	Practice Committee 3.30 p.m.
		" 15	Council 4 p.m.—Ordinary Meeting.*
Mar. 1	Entries close for April Membership Examination.	" 24	Midsummer Day.
" 8	Masonic Lodge 4 p.m.		
" 9	Practice Committee 3.30 p.m.		
" 16	Council 4 p.m.—Ordinary Meeting.*	July 15	Victory Scholarship Competition, Part II.
" 22	Membership Examination opens.		
		Sept. 1	Entries close for October Membership Examination.
Apl. 6	Practice Committee 3.30 p.m.	" 7	Council Meeting 3 p.m.
" 11	Building Exhibition, Olympia, opens.	" 22	Membership Examination opens.
" 14	Good Friday.	" 29	Michaelmas Day.
" 16	Easter Day.	" 30	Last day for delivering Nominations for Council.
" 17	Bank Holiday.		
" 20	Council 4 p.m.—Ordinary Meeting.*		
" 27	Building Exhibition closes.	Oct. 5	Practice Committee 3.30 p.m.
		" 9	Last date for delivering Ballot Papers for Council Election.
May 1	Entries close for "Victory Scholarship" Competition.	" 12	Council 4 p.m.—Special General Meeting 8 p.m. Election of Council for 1922-23.
" 3	Membership Examination closes.	" 31	End of Session.
" 4	Practice Committee 3.30 p.m.		
" 10	Masonic Lodge 4 p.m.		
" 11	Council 4 p.m.—Ordinary Meeting.*	Nov. 3	Membership Examination closes.

* The time and other details of the Ordinary Meetings will be announced in the Journal.

For the Information of Members.

The Library. Gifts of books on Architecture and allied subjects, and donations to the Library Fund are invited. Books from the technical circulating library are sent through the post, or may be obtained on loan personally by members on application. The Library Rules are published in the Year Book, and a copy of the Catalogue may be obtained (free of charge) from the Librarian.

Book Reviews. The Editor of the JOURNAL will be glad of the assistance of members who will undertake reviews. They are asked to mention the subject with which they would prefer to deal.

Professional Appointments. Members seeking appointments or requiring Assistants should notify the Secretary of their requirements. There is no charge for the use of the Register.

Subscriptions. Annual subscriptions are due and payable in advance on November 1st of each year, and members are invited to make use of the Bankers' Order Form method of payment where possible. This form may be obtained from the Secretary.

The Examinations. The Membership (2b) examination is held in April and October. Entries close on March 1st and September 1st.

Awards and Scholarships. Particulars of the Victory Scholarship, the Travelling Studentship, the Architectural Scholarship, and other competitions are announced in the JOURNAL from time to time.

Professional Ethics, Advice and Defence. The Society's Code of Professional Ethics and the rules and regulations for legal advice to, and professional defence of, members of the Society are set out in the Year Book.

Publicity. Members can greatly assist the Society by keeping the Secretary supplied with cuttings from local newspapers and other information of interest to architects in general and Members of the Society in particular.

Beaux Arts Atelier. Particulars of the Atelier and the qualifications for admission can be obtained from the Secretary.

Changes of Address. Members are requested to notify the Secretary at once of any temporary or permanent changes in their address, so that the Registers may be kept up-to-date and the difficulties avoided which arise when communications to members are returned through the post.

Masonic Lodge and Chapter. The Society of Architects Lodge meets on the second Wednesday in November, January, March, and May, and the Chapter on the second Wednesday in October, December and February, at the Holborn Restaurant. The Secretary is Mr. C. McArthur Butler. Visiting "members" from other Lodges and Chapters are always welcome.

Communications. All communications should be addressed to THE SECRETARY OF THE SOCIETY OF ARCHITECTS, 28, BEDFORD SQUARE, LONDON, W.C. 1. Telegrams, "Crypt," Westcent, London. Telephone, "Museum" 942.

THE
Journal
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New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.

Higher Buildings for London.*

INTERIM REPORT OF THE LONDON BUILDING ACT COMMITTEE OF THE R.I.B.A.,
NOVEMBER 8, 1921.

Following the reading before the Institute in March, 1920, of a paper by Mr. Austen Hall on "Departmental Stores," and of a paper by Mr. Deissas Joseph on "Higher Buildings for London," a special Committee was appointed to consider and report upon the reform of the London Building Acts.

The Committee decided that they would, in the first instance, devote their attention to the questions of Higher Buildings and Cubical Contents, leaving to a later date the consideration as to whether the amendment of the London Building Acts was required, for the following reasons:—

1. That the adequate development of London is seriously restricted by the present application of the London Building Act and the General Powers Act.
2. That its development must be facilitated in order to keep pace with the present unsatisfied demands for commercial and residential accommodation.
3. That a reasonable increase in the height of buildings is the only method of meeting the demand for increased accommodation.

After dealing with evidence from architects in London, Manchester, Liverpool and New York, and a memorandum prepared by the Incorporated Association of Retail Distributors, outlining different aspects of the question of higher buildings, the Committee came to the conclusion that any reforms should be by administration and not by Act of Parliament, it being pointed out that the proposed increase in the height of buildings and the proposed modifications with regard to the cubical contents could both be attained without altering the Acts of Parliament, because, under Section 47 of the Building Act of 1894, the height of a building is limited to 80 feet, with two storeys in the roof, but the clause permitted the Council to sanction higher buildings; while under the General Powers Acts of 1908 the regu-

* Summary of a report in the R.I.B.A. Journal, February 11th, 1922.

lations limiting to 60 feet the height of buildings of large cubical contents were arrived at by resolution of the Council, and could therefore be modified by resolution.

This being so they urged that the London County Council should now announce its willingness to modify its regulations so as to enable it to consider applications for higher buildings on the following lines:—

1. In the case of a building in a street of greater width than 80 feet, an increased height should be permitted equal to the greater width of the street, with two fire-resisting roof storeys above same, but in no case a greater height than 150 feet, exclusive of two storeys in the roof.

2. That, in the case of buildings opposite parks, squares, and public gardens not less than 150 feet wide, or facing commons, open spaces, and the riverside, or when facing down the length of a street, such buildings should be permitted to a height of 150 feet exclusive of two storeys in the roof.

3. That, in the case of the City of London, buildings 120 feet high, exclusive of two storeys in the roof, should be permitted in any street, irrespective of its width or date.

4. That such consents should be subject to adequate safeguards as regards health, means of escape and fire attack.

Deputations from the Committee then waited upon the following bodies:—

The London Building Acts Committee of the London County Council, on February 21, 1921.

The City Lands Committee of the Corporation of the City of London, on March 9, 1921.

The Fire Brigade Committee of the London County Council, on April 21, 1921.

The Metropolitan Branch of the Society of Medical Officers of Health, on May 11, 1921.

The London Society, on Monday, October 10, 1921.

The Incorporated Association of Retail Distributors, on Wednesday, October 19, 1921. (This Association includes all the large London stores, such as Selfridges, Whiteleys, Harrods, Dickins & Jones, John Barkers, &c.)

In the case of the City Lands Committee the following resolution was passed:—

“That having heard the deputation, this Committee are in sympathy with the views expressed that buildings in the City of London should be allowed to be erected to a height of 120 feet, with two storeys in the roof, subject to the questions of conditions of health and protection from fire being properly considered.”

In the case of the Fire Brigade Committee of the London County Council, the Chairman promised that the whole scheme should be considered by a joint meeting of the Building Acts Committee of the London County Council and the Fire Brigade Committee of the London County Council, after which they communicated their decision as follows:—

“The limit of the height of buildings imposed by Section 47 of the London Building Act, 1894, applies unless it is waived by the Council, and as regards buildings coming within Section 17 of the London County Council (General Powers) Act, 1908, the limit of height imposed by the regulations made by the Council under the Act, may be waived as the Council thinks fit. The Council does not consider that the circumstances justify any action being taken in the direction suggested by the Building Act Committee of the Royal Institute, and I am to state that the Council has decided to continue its present practice of dealing on its merits with each case which comes before it.”

The Metropolitan Branch of the Society of Medical Officers of Health passed the following resolution:—

“This Meeting of Medical Officers of Health of London is of opinion that, having regard to the fact that construction of rooms underground would thereby be discouraged, the proposals of the Building Act Committee of the Royal Institute of British Architects in regard to higher buildings are reasonable, provided adequate safeguards are established in relation to lighting and ventilation and the convenient arrangement of sanitary accommodation.”

The London Society expressed the following opinion:—

“ The Committee of the London Society are strongly of opinion that a general increase of the height of buildings such as is proposed would be inadvisable and detrimental to the amenities of London, and are content that the present law should stand, especially as the London County Council have the power to consent to an increased height where considered advisable. The London Society are further of opinion that the height of buildings in London should be related to the width of the streets.”

The Incorporated Association of Retail Distributors passed the following resolution:—

“ That they do cordially support the scheme of the Building Act Committee of the R.I.B.A., and consider the proposed modifications in the administration of the London Building Acts and the General Powers Act are essential for the adequate development of the commercial and industrial interests of London, and are in the best interests of the adequate progress of the country of which London is the metropolis.”

CONCLUSIONS.

As a result of their investigations, extending over 18 months, the Committee came to the following conclusions:—

1. That there are no practical difficulties affecting structure, fire proofing, means of escape, water supply, and the attacking of fire in case of buildings 150 feet high.
2. That the case for buildings of this height facing the river, open spaces, squares, and parks cannot reasonably be objected to.
3. That the case in favour of high buildings in streets such as Portland Place, 125 feet wide, is equally reasonable.
4. That the same view holds good to high buildings in such places as Lincoln's Inn Fields, 645 feet wide.
5. That the case for the City of London stands alone, as it is the one square mile in which is concentrated the centre of the financial, shipping, and banking activities of the Empire.

The need for higher buildings in the City area is imperative, as it is vital that business men should be able to find offices within a few yards of the exchange or centre where their particular business is dealt with. To increase the height of buildings in such situations is the only way in which additional office accommodation can be provided in the restricted areas in which it is urgently needed.

6. That the restriction on the height of large cubical content buildings occupied by the great stores constitutes the restriction of trade adversely affecting national prosperity.

7. That the increase in domestic accommodation at park-side and river-side and in the wide streets leading from the centre, such as Clapham Road, 117 feet and upwards in width, will contribute towards the solution of the housing problem in Central London.

8. That higher buildings will produce larger assessments that will form the security for municipal loans, to be devoted to the widening of congested thoroughfares.

9. That it thus being essential to provide for the great interest concentrated in the City of London, to provide for the accommodation for the great commercial interests in Central London, to provide further domestic accommodation for those who do not require to live on the outskirts, and desire to be readily accessible to their work without being involved in long railway journeys, the administration of the Acts of 1894 and 1908 should be now adapted to the changed conditions, and that the London County Council should be urged to exercise its permissive powers in a more generous spirit, on the lines of the scheme prepared by this Committee.

RECOMMENDATIONS.

The Committee is satisfied that the case for higher buildings in the situations defined by them and for buildings of larger cubical content, calculated either vertically or horizontally, where provided with the necessary safeguards, has been completely established, and that efforts should continue to be made to induce the London County Council to meet the reasonable requirements which have been put forward and so strongly supported by the representatives of those specially interested, namely, of the large stores and shopkeepers and the City of London and approved by the London Medical Officers of Health.

In view of the importance of the subject, the Committee suggested that a general meeting of members of the R.I.B.A. should be convened to consider the report.

In a minority report signed by Mr. Arthur Keen on November 10, 1921, a desire was expressed to substitute the following for the general conclusions arrived at by the majority of the Committee:—

That any general increase in the height of buildings would be detrimental to the amenities of London.

That the powers possessed by the County Council of permitting an increase of height in particular cases are adequate and are exercised in a reasonable way.

That the open spaces and wide streets of London are of great value in securing the free circulation of air, and that their usefulness in this respect should not be impaired by permitting the erection of high buildings adjoining them.

That the principle of increasing housing accommodation by means of high buildings is a reactionary one and undesirable from the point of view of family life.

That in the case of buildings which, in order to secure unity of design, are required to be of the height allowed by the Building Act the restriction of the height of the top floor to 60 feet in cases of large cubical contents is no longer necessary or desirable in view of the methods of construction and fire attack now available.

On receiving the minority report, the Council referred it to the Art, Practice and Science Standing Committees, and to the Town Planning and Housing Committees.

The Art Committee *nem. con.* resolved to support the Minority Report and to oppose the definite proposals of the Building Act Committee as outlined under heads 1, 2 and 3 in Section I. of the report, but are in agreement with the conclusion No. 6 under Section II. that in the case of the large cubical content buildings of the great stores a limit of 60 feet for the highest floor upon which the public may do its shopping is unreasonable.

The Practice Standing Committee gave their general approval to the Interim Report of the London Building Act Committee.

The Science Standing Committee, having read the Report of the Art Standing Committee upon the Interim Report of the London Building Acts Committee of the R.I.B.A., desires to associate itself strongly therewith; but owing to the importance of the subject, maintains that the Interim Report of the London Building Acts Committee should be submitted to the whole body of members of the R.I.B.A.

The Town Planning and Housing Committee were unanimously in general agreement with the principle expressed in the Minority Report.

REPORT OF THE COUNCIL.

On receiving the above reports, the Council gave careful consideration to the whole matter, and finally approved the Report of the Art Standing Committee, which supported the Minority Report and has invited the general body of the R.I.B.A. to discuss the question of Higher Buildings for London at a business meeting on March 6, 1922.

Proceedings of the Society.

An Ordinary Meeting of The Society of Architects was held at 28, Bedford Square, W.C.1, on Thursday, February 9th, 1922, at 6 p.m.

Mr. GEO. H. PAINE, a Vice President, was appointed Chairman, and the minutes of the previous meeting, were read, confirmed and signed.

The following announcements were made:—Nominations: For Fellowship, 2; for Membership, 2.

ADMISSIONS:—

AS A LICENTATE.—BLANCHARD, JACK, Clifton House, Meole Place, Shrewsbury.

RESIGNATIONS.—GEORGE TOPHAM FORREST (Fellow), of London.

DEATHS.—JOHN J. LISH, Past President, Newcastle-upon-Tyne, an original member of the Society (1884), and ERNEST WISE, Launceston, one of the earlier members (1889).

ELECTIONS:—The following Candidates, whose nominations had been previously announced and published, were submitted for election under Articles 12 and 17 of the Articles of Association, and were declared to be duly elected:—

AS FELLOWS.—ATKINSON, ARTHUR SPENCE, M.S.A., 10, Richmond Terrace, Blackburn; DOWSETT, SYDNEY CHARLES, M.S.A., Box 1,049, Johannesburg.

AS MEMBERS.—*BOWER, ERNEST, Wellhouse, Golcar, Huddersfield; CHARLES, JOHN ACHESON, 82, Park Drive, Barrow-in-Furness; FOWLER, CHARLES JOHN, 171A, High Street, Tonbridge; *GOOCH, FREDERICK WALTER FOWLER, 111, Sefton Street, Southport; *HUGHES, JAMES O'HANLON, 46, Maitland Park Road, Haverstock Hill, N.W.3; JONES, ALBERT HENRY, 10, Conduit Street, W.; *OSBORNE, CYRIL CHARLES GEORGE, 95, Han-kinson Road, Winton, Bournemouth; POOLE, WILLIAM HAROLD, 33, Earl Street, Maidstone; WARWICK, FRANK, 3, St. Marks Mansions, Tollington Park, N.4; *WINKS, ERNEST WALL, 93, Bridge Street, Worksop, Notts.

* Qualified at the October Examination.

RESIGNATION OF THE PRESIDENT.—The Chairman announced that Sir Charles T. Ruthen had resigned his office as President of the Society following the resolutions of the Council passed with reference to his statements on "The Architect and the State" made at the annual meeting of the Society on January 12th.

In reply to a question the Chairman intimated that the matter of filling the vacancy in between the Special General Meetings was one for the Council who had the subject under consideration. Their decision would be made known to the members through the *Journal* in due course.

The Study of Ancient Painted Glass.

On Thursday, March 9th, 1922, at 8 p.m., Mr. John H. Knowles will give a Lantern Lecture at the Society's headquarters, 28, Bedford Square, on Ancient Painted Glass. He will illustrate his remarks with designs and cartoons, and examples shewing the methods of manufacture, painting, firing and glazing, shew what a study of painted glass from a technical standpoint reveals, and how behind the times we are in comparison with other countries in the study of comparative archaeology and architecture.

The meeting is open to any one interested, including ladies, and no tickets or invitations are required.

Architectural Education.

FROM A REPORT IN "THE BUILDER" OF A PAPER READ BY MR. ARTHUR J. DAVIS, F.R.I.B.A.
BEFORE THE MANCHESTER SOCIETY OF ARCHITECTS.

In the course of an address entitled "Some Remarks on Architectural Education," MR. ARTHUR J. DAVIS, F.R.I.B.A., at the last meeting of the Manchester Society of Architects, said that in architecture, specialisation had made its appearance, although that profession was one which demanded perhaps the most general knowledge of all. The combining of skill in the application of art with the management of a complicated practice covered such a large field that few, even after a lifetime of study, could claim to be more than on the threshold of the subject. No architect could cope single-handed with all the ramifications of his daily work, but was constantly obliged to call in specialists to elaborate the details of his designs, his duty mainly consisting of control and general organisation.

It followed that a system of education which was not based on well-organised lines could never produce results which would meet the demands of modern civilisation. Architectural instruction and training were not sufficiently within the reach of the poorer student, who, notwithstanding natural talent and ambition to achieve distinction was unable to pay the high fees demanded by technical schools and universities. Higher education should be open to all and sundry, free of charge, provided each student, on being tested by examination, could show that he was worthy of the trouble and expense that the country was prepared to take on his behalf. The cost of maintaining technical schools should be the first charge on the nation's finance, as being the soundest investment for its future prosperity and greatness.

The able leaders of existing universities, were second to none in their ability to guide the rising generation. The results achieved during the past decade were already bearing fruit. Architecture, as an art, was once more coming into its own after a long period of stagnation, and it was chiefly owing to these devoted leaders that modern buildings showed signs of refinement and taste, sadly lacking in those designed some twenty years ago. The schools which existed in London and large provincial centres were giving the student a far more comprehensive and general knowledge than it was possible to attain under the pupilage system.

The evening schools supplemented to a certain degree the knowledge an artied pupil would acquire, but in time even those excellent institutions were considered insufficient, and eventually the architectural schools came into being and gradually replaced the pupilage system altogether.

At the present time he thought the pendulum was inclined to swing too far in the direction of theoretical training to the detriment of practical experience. In all educational establishments it was only natural that theory was preferred to practice, and the constructional and professional side, although dealt with, was necessarily only considered from a school standpoint. The syllabus of the principal schools took the novice through the various stages of design, and taught him history, construction and mathematics. His training now covered a maximum period of five years, and, generally speaking, dealt very adequately with most of the theoretical knowledge a young architect should acquire.

He thought the curriculum had been carefully considered and could only be altered with advantage in small details, but his principal criticism was that, under the present system, the school tuition could not and never would teach a young architect all that he should know. His greatest possible asset, practical experience, could not be grafted on to a course of theory. Indeed, he ventured to say that a sound office training was

in after life the most valuable factor in an architect's career, and it was only when the system was so arranged as to enable students to become familiar with practical work and simultaneously carry on their theoretical studies that the best results would be obtained.

It had been suggested that professional practice and office administration might be taught in the schools, but, when one remembered the hundred-and-one problems which faced the architect in his constant dealings with clients, contractors, legal matters, correspondence, &c., he did not think it was possible to include that in any curriculum. That point had already been considered by specialists, and they had made an effort to deal with the question by requesting students in the fourth and fifth years to put in part of their time in an architect's office—an excellent idea, but easier to formulate than to put into practice. Many leading architects had informed him that a fourth or fifth-year student, although his knowledge of architectural theory and design might be advanced, was of very little value compared with a trained assistant, and he saw breakers ahead when the great number of students who were now entering the schools arrived at that stage of their training and desired to enter an architect's office and be paid for their services.

It was usual for a beginner, before he started on his own account, to spend a certain amount of time as an assistant, and he proposed to examine how far his school knowledge would fit in with the requirements of an average practice. Any architect worthy of the name naturally wished to design in his own particular manner, and looked to his assistants to work out and detail under his supervision ideas which he personally might not have time to elaborate. They should not have to design or deal with the architectural composition, but content themselves with an intelligent interpretation of their chief's suggestions, and this faculty was the most useful attribute that an assistant could possess.

In his opinion, one of the fundamental weaknesses of the present school training was that, in order to pay their way and produce a satisfactory yearly balance sheet, the schools were obliged to charge the students comparatively heavy fees and to accept, for financial reasons, young men who had no special ability and who would never become architects of any standing. It was common knowledge that the profession was overcrowded, and yet increasing numbers of students were entering the schools, although it was well known that a large proportion had neither the vocation nor the necessary qualifications to make successful careers. On the other hand, there must be many others with great possibilities who were prevented from entering a profession in which they might eventually distinguish themselves owing to lack of funds.

It would appear that for the good of architecture a large number of students was not the ideal, but that a selection chosen for their capabilities would be preferable, regardless of any question of their financial status. At present that ideal could not be achieved, as the cost of upkeep of the schools was very high. He believed experts maintained that higher education could not possibly be run on profitable lines, and that students' fees should never be such as to cover the cost of their education; in other words, that outside subsidies should be forthcoming to supplement the revenues obtained from the students themselves.

Although the curriculum in the schools had been extended from three to five years and the subjects taught had been considered with great care and discrimination, they were so numerous and covered such a wide field that the period allotted to study was insufficient, especially if it were taken into consideration that the larger proportion of the students' time during the last two years was presumed to be spent in an architect's office. The haste with which a man was rushed through the many fields of instruction savoured somewhat of cramming, and, although nowadays the fashion

was to speed up, yet, he thought, students should be given opportunities to extend their studies over a far longer period should they consider it desirable.

He suggested it would be policy to make the schools practically independent of students' fees. That advantage could only be attained by the granting of subsidies, either from the State or from other sources. It might at first glance seem a difficult problem to solve, but the system had been in operation on the Continent for a considerable number of years, where all the higher schools were supported by the State, which paid the professors' salaries and for the upkeep of the special buildings, libraries, museums, &c., together with their technical equipment. Abroad any student with a natural talent had the best possible educational ability of the country at his disposal. Many people who had a knowledge of establishments controlled by the State would be inclined to object to that policy on the score that it necessarily involved interference and numerous visits from officials, who might possibly prove a hindrance to the smooth working of the system and might oppose or delay innovations with which they were not in sympathy. In this country at present those fears were well-founded, but that kind of supervision was not really a necessary adjunct to State aid. For instance, in France, although the nation footed the bill it appointed a Minister of Fine Arts, a man of wide views and broad sympathies to control the work of technical schools and similar institutions.

At the Ecole des Beaux Arts it had been found necessary by experience to ensure that before any student was allowed to belong to the school he should have passed a very severe test, the purpose of which was to divide the sheep from the goats. From the start the undesirable student was eliminated. If he were admitted he would only fall out during the later years of training after having occupied valuable space and wasted his own and his professor's time. At present he feared all architectural schools sheltered too many of this type of man, who was accepted for the financial support he brought, and he was informed that already professors were being assailed by demands from such of these mediocre students who had finished their training and found themselves unable to obtain work. The profession was overcrowded, and although there was always room at the top for the brilliant student who would eventually find scope for his talents the masters were quite unable to find careers for the many others of insufficient ability who were turned out yearly under the present unsatisfactory system. In time those men became something of a danger to the profession—for many of them, failing to obtain work in architect's offices, drifted into acting as draughtsmen for firms of specialists, who were thus enabled to produce inferior designs which competed with work which should be entrusted to a capable architect.

The examination system was not ideal for ascertaining the knowledge of all candidates, and it had the disadvantage of sometimes eliminating aspirants of real merit who did not possess the knack of passing those tests, but at present no better method seemed to have been arrived at. In any case it was surely safer to test a man's knowledge by examination rather than by a reference to his banking account. At the Ecole des Beaux Arts, an institution which had been successfully carried on for over two hundred years, an entrance competition covering many subjects was held twice a year. Four hundred to five hundred candidates entered for that competition at each session, but only the first fifty were accepted, among whom were a small percentage of foreigners. The rejected often presented themselves again and again, but if they could not pass that preliminary test they dropped out automatically and never entered the profession. The advantage was obvious; the standard of the school was kept high and it was ensured that the material which the professors would have to fashion would be worthy of their efforts.

With reference to the insufficient opportunities for the student to obtain practical experience, and the lack of time allowed for the vast number of subjects for him to master. In his opinion it was a mistake to divide the different stages of education in the schools into a term of years. They heard of first, second and third-year students, which meant that the knowledge acquired during the various terms was spread over a definite period, involving the constant attendance of the student. He suggested the curriculum should be extended over a much longer period and arranged in terms of advancement rather than of years.

All students, after they had attained a certain proficiency and passed preliminary tests, should be allowed and encouraged to work in offices, to travel, or to acquire architectural knowledge by other than school methods. It should be possible for them to work for an architect and only enter for school competitions when they had time at their disposal, and no penalty should be attached to that procedure. The authorities would define the minimum amount of school work to be produced each year. It might be safely stated that in every office there were busy and slack times, and during the latter the permanent office staff could adequately cope with the work. When there was extra pressure it would be greatly to the architect's advantage could he call upon the schools to provide him with help for competitions or any special jobs with which his usual staff was unable to deal. Work of that nature should be paid for by the day or the hour, and the student would thus be enabled at least partially to earn his living, while at the same time pursuing his studies.

At the present time that was impossible, as every student must follow each step of the school curriculum. If he dropped out, even for a short period, his whole career might be affected. It was admitted that a man adopting that course would take longer to finish his theoretical education, but the advantage was that during his school years the student thus came into direct contact with the elder members of his profession. He could follow the various ways in which their offices were conducted, and acquire experience which should be invaluable to him in after-life.

In England there might be objections, although he did not think there was any insuperable difficulties in adopting the foregoing suggestions. They had been in practice for generations in France, where some students took four years to complete the course, and others as many as ten. There it was recognised that the man who took longer over his training was not necessarily a backward student, and that no school, however efficient, could impart all the knowledge required in architecture. It was also appreciated that intensive culture in the end rarely produced the best results. It was believed that a student should be encouraged to organise his own life, and, so long as he produced a sufficient quantity of work to justify his retention in the schools, he was in every way permitted to develop on his own lines.

There were in England a great many trained assistants whose ages ranged from twenty to thirty years who might with advantage be brought into the proposed broadened scheme. They were expert men, but in many cases lacked the finished theoretical training only obtainable in a good school. The technical classes, ateliers, and evening schools dealt within certain limits with that type of man, but the matter went deeper and was really beyond their scope. The architect's assistant would be as much helped by a theoretical training in the schools as students at the schools would by a term spent in an architect's office.

His criticisms were not levied personally against the professors and teachers in the schools at the present time, whose work was the foundation of a system of education, which, when broadened, co-ordinated, and democratised would produce in a few years architects who would have had advantages which were not obtainable by their predecessors.

The Loan Library.

Members in general, and country members in particular, are reminded of facilities which the Society's Loan Library affords them for borrowing books through the post. They are despatched at the cost of the Society and returned at the cost of the borrower.

Copies of the 1914 catalogue are available, and a list of the additions is in preparation.

Borrowers in possession of overdue books from the Loan Library are requested to return them at their early convenience.

The following books have been presented to the Library*:

SPECIFICATION, No. 24 (1922). Edited by Frederick Chatterton, F.R.I.B.A.; London: Technical Journals, Ltd.

KIDDER'S ARCHITECTS' AND BUILDERS' HANDBOOK. Edited by Thomas Nolan, M.S., A.M.; New York: John Wiley & Sons, Inc.; London: Chapman & Hall, Ltd., 1921. Price, 40s. net.

BUILDING CONTRACTS. The Principles and Practice of their Administration (The D.U. Technical Series). By Edwin J. Evans; London: Chapman & Hall, Ltd., 1922. Price, 10s. 6d. net.

A HISTORY OF ARCHITECTURE ON THE COMPARATIVE METHOD. By Sir Banister Fletcher, F.R.B.A., F.S.I., F.R.G.S., F.R.S.I. Sixth edition, rewritten and enlarged; London: B. T. Batsford, Ltd., 1921. Price, £2 2s. net.

REVERIES IN A VILLAGE CHURCH. By Joseph P. Pearce, M.S.A.; Liverpool, 1921. Presented by the Author.

ACADEMY ARCHITECTURE. Edited by A. E. Martin-Kaye; Vol. 53 (1921); London: B. T. Batsford, Ltd.

The following books have been purchased for the Library:—

THE ECCLESIASTICAL ARCHITECTURE OF ITALY, FROM THE TIME OF CONSTANTINE TO THE FIFTEENTH CENTURY. By Henry Gally Knight, F.R.S., F.S.A.; 2 vols., fo.; London: Henry Bohn, 1843.

ARCHITEKTONISCHES SKIZZENBUCH. 7 vols.; Berlin: Ernst & Korn, 1853-1880.

THE DESIGNERS OF OUR BUILDINGS. By L. Cope Cornford; London: The R.I.B.A., 1921.

REINFORCED CONCRETE SIMPLY EXPLAINED. By Oscar Faber, O.B.E., D.S.C., A.M.I.N.S.T.C.E.; London: Henry Frowde and Hodder & Stoughton; demy 8vo.

EAST ACTON MANOR HOUSE. Being the VIIIth Monograph of the Committee for the Survey of the Memorials of Greater London.

PERIODICALS. The Library has become a subscriber to the following important American Technical Journals:—

AMERICAN ARCHITECTURE AND ARCHITECTURAL REVIEW.
ARCHITECTURAL FORUM.
ARCHITECTURAL RECORD.

* Presented by the Publishers except where otherwise stated.

The Architects' and Surveyors' Approved Society.

(NATIONAL HEALTH INSURANCE.)

At a general meeting of the Architects' and Surveyors' Approved Society, held at 35, Bedford Square, W.C., on Tuesday, January 31, at 6 p.m., the members present approved of the Committee of Management's recommendations for scheme of additional benefits; passed the new form of rules (model rules prepared by Ministry of Health) necessitated by various changes in Insurance Acts; appointed Mr. E. J. SADGROVE, F.R.I.B.A., F.S.A.R.C., as a trustee in the place of the late Mr. ERNEST NEWTON, R.A., and elected a Committee of Management, as follows:—Chairman, LEWIS SOLOMON, F.R.I.B.A.; Treasurer, H. D. SEARLES-WOOD, F.R.I.B.A.; GEORGE CORDEROY, F.S.I., W. FAGG, P. W. FARMER, ALEXANDER GODDARD, O.B.E., W. H. HAMLYN, A.R.I.B.A., G. N. HANNAM, P.A.S.I., JOHN B. HECTOR, M.S.A., R. B. MANN, F.S.I., C. McARTHUR BUTLER, M.S.A., E. C. P. MONSON, F.R.I.B.A., F.S.A.R.C.; E. J. SADGROVE, F.R.I.B.A., F.S.A.R.C.; Secretary, F. R. YERBURY; Assist. Secretary, Miss S. DOUBLE, F.F.I.

The Government report on the valuation of the Architects' and Surveyors' Approved Society covering the period from the formation of the Society to the end of 1920 justifies the contention of those responsible for the formation of the Society, that it would be advantageous for members of the architectural and surveying professions coming within the scope of the National Health Insurance Act to conduct a Society of their own.

The total number of persons who have joined the Society since its formation is 2,525, and of these 746 have ceased to be members, mainly owing to their having passed out of the scope of the National Insurance Act.

The following amounts have been paid in benefits from 1912-1920:—

Sickness benefit, £1,350 13s. 10d.; disablement benefit, £314 12s. 6d.; maternity benefit, £373 10s.; subscription to hospital and specialist's fees, £6 16s. 3d.

The funds invested by the Society to December 31, 1920, totalled £7,553 0s. 2d.

The experience of the Society has shown that it is in a position to give larger benefits in return for contributions paid than those originally provided for by the National Insurance Act. As a result of the Government valuation, the Society has been empowered to allocate a sum of £2,190 for expenditure in extra benefits during the next five years, and proposes to dispose of this sum in the following way.

The increased cash benefits will only apply to members who were on the Society's books on July 5th, 1920, and who were continuously insured from January 1st, 1919. Increased Maternity Benefit to £2 10s.; increased Sickness Benefit to (men) 17s. 6d., (women) 14s. 6d.; increased Disablement Benefit to 8s. 9d.

These amounts have been arrived at as a result of actuarial calculation, and have been approved by the Ministry of Health.

In addition to the above extra benefits the Committee of Management proposes to provide members of the Society with—Dental Treatment, Hospital Treatment, Medical Appliances, Optical Treatment, Convalescent Treatment.

It is hoped that members will do their best to increase the membership of the Society, which should include *all* those employed in Architects' and Surveyors' offices coming within the scope of the National Insurance Act, as it is obviously to the advantage of those concerned to belong to a Society which is carried on for their exclusive benefit.

The President, 1922.

Mr. Edwin J. Sadgrove has been co-opted by the Council of The Society of Architects as President for the remainder of the unexpired term of office rendered vacant by the resignation of Sir Charles T. Ruthen. Mr. Sadgrove this year celebrates his "coming of age" as a member of the Society, having been elected in 1901, and since 1906 has been a member of the Council and has held office as Honorary Treasurer, 1910; Vice-President, 1914-15; and as President, 1916-20. His services to the Society were recognised by the Council in 1920 when they awarded him the Gold Medal. Mr. Sadgrove is one of the Society's representatives on the R.I.B.A. Unification Committee, the Building Trades' Parliament, the Architects' and Surveyors' Approved Society, of which he is also a Trustee, the Beaux Arts Committee, the R.I.B.A. Conditions of Contract Conference, and his services are constantly requisitioned in connection with the Society's negotiations with Government Departments, public bodies and kindred institutions on matters of professional interest. Mr. Sadgrove is a Fellow of the R.I.B.A. and of the Institute of Arbitrators of which latter body he has recently been elected President, and has been in practice as an Architect in London for thirty-five years. He specialises in commercial buildings and has devised and patented various appliances and materials connected with the equipment, repair and decoration of buildings. He is a Founder, Past Master and Treasurer of the Society of Architects Masonic Lodge No. 3244, a Founder and Treasurer of the R.A. Chapter which is attached to it, and holds London Rank.

Notes from the Minutes.

REGISTRATION IN SOUTH AFRICA.—The Council has authorised a grant of fifty guineas from the Society's funds to the South African Branch as a contribution to the fund which is being raised towards the cost of promoting a Registration Bill for Architects in the Union of South Africa.

BRITISH ENGINEERING STANDARDS ASSOCIATION.—The Council has accepted an invitation to appoint a representative to take part in a Conference on a proposal to draft a standard specification for sand lime bricks, and has delegated Mr. E. J. Sadgrove, P. Pres., to represent the Society.

HON. AUDITORS.—Mr. H. C. H. Monson has accepted the position of Hon. Auditor for the current year in succession to Mr. William Hoe, who has served in that capacity for the last two years and has voluntarily relinquished the office.

R.I.P.H. PLYMOUTH CONGRESS.—The Council has accepted an invitation to be represented at the Congress in June next and has appointed Mr. E. Coath Adams Local Hon. Secretary for Plymouth, as the Society's delegate.

ARCHITECTS' AND SURVEYORS' APPROVED SOCIETY.—It was reported that at the Annual General Meeting of this Society held on January 31, 1922, Mr. E. J. Sadgrove, F.S.ARC., P.P.S.A., was elected a Trustee in the place of the late Mr. Ernest Newton, R.A., and that he was also re-elected on the Committee of Management, together with Major E. C. P. Monson, F.S.ARC., P.P.S.A., and Mr. C. McArthur Butler.



[Photo by Campbell Gray.]

MR. EDWIN JAMES SADGROVE, F.R.I.B.A., F.S.A.R.C.
PRESIDENT 1916-20 AND 1922.

Co-opted by the Council, February 23rd, 1922, in place of Sir Charles T. Ruthen, resigned.

Correspondence.

TO THE EDITOR. THE JOURNAL OF THE SOCIETY OF ARCHITECTS.

UNIFICATION AND REGISTRATION.

SIR,—At the meeting of the Unification and Registration Committee, held on February 7, at the Royal Institute, the following resolution was carried by 30 votes to 1:—

“That this meeting of the Unification and Registration Committee re-affirms its resolution of May 12, 1921—that the principle of Scheme A, namely, the bringing of all architects in the United Kingdom into membership of the R.I.B.A.—be adopted as the basis of Unification.”

At the request of the Committee the resolution was reported to the Special General Meeting of the Royal Institute held the same afternoon.

At this Special General Meeting the following resolution, moved by Mr. A. W. S. Cross and seconded by Mr. George Hubbard, failed to secure the necessary majority and was therefore not carried.

“That this Meeting is of opinion that the conditions for the Unification of the profession should form part of a Registration Bill, and that the present system of admittance to the Institute, including compulsory examination, should continue in force until a Registration Bill is passed.”

Under By-Law 68 the subject cannot again be submitted during the current session without the consent of the Council.

ARTHUR KEEN, Hon. Secretary,
Unification and Registration Committee.

9, Conduit Street, W., February 8, 1922.

“STONE CARVERS’ WAGES.”

SIR,—May I call the attention of the members of the Society of Architects to the position of affairs that has arisen by the men’s refusal to accept any reduction of wages, now that the cost of living has decreased so much?

The men under the abnormal circumstances of the war obtained greater increases than any other profession, and to-day, when it is a national duty to lessen the high cost of building, the men persistently refuse to accept any reduction and will not accept our offer to go before the Court of Arbitration.

Before the war the stone carvers’ minimum rate was 1s. 1d. per hour, and to-day it is 2s. 10d., with the more skilled men ranging between 3s. 3d. to 3s. 6d. per hour. These high rates were agreed for the period of the war and nine months after, and though protracted negotiations have been in hand for a long time to obtain a just reduction, the men persistently refuse to give way. The employers have, however, made a determined stand to enforce a reduction of 3d. per hour, offering at the same time to stabilise the rate for 12 months, but as the men refuse to accept this, all stone carving has ceased pro tem.

We know this must cause considerable inconvenience to building contracts on hand, but we feel assured of the sympathetic support of architects and builders in this crisis. Further, as there are always a few apathetic employers who apparently take no interest in reducing the cost of building work, the members of this association appeal to all architects and builders with contracts on hand to ascertain whether the carving contractor employed is supporting the action of this association or not, and what valid reasons can be given for maintaining the present high cost.

W. AUMONIER.

Hon. Sec., The Master-Carvers’ Association of London.

84, Charlotte Street, W., February 9, 1922.

OVERCROWDING OF THE PROFESSION.

SIR,—In view of the general discussion which has been taking place recently in connection with the numbers entering the Architectural profession, and the suggestion made that the Schools are unduly encouraging students to enter a profession in which there is little chance of their obtaining a reasonable livelihood owing to its already overcrowded state, the Council of the Architectural Association has asked me to issue the following statement as to the steps taken to ensure that only those who show an aptitude for Architecture, and are likely to become efficient and useful members of the Profession, are allowed to enter or remain in its Schools.

In the first instance, no candidate's application for admission will be considered unless he or she has attained to a good standard of general education, equal at least to the Senior Oxford or Cambridge Local examination, or London Matriculation. Applicants who produce the necessary evidence of having reached the standard of general education required, are interviewed, and at once advised if it is considered that they are not fitted for the Architectural profession.

Approved candidates are allowed to sit for the Entrance Examination, which consists of the following subjects:—1. English Composition. 2. Freehand Drawing from the Cast. 3. Mathematics (Algebra, Quadratic Equations). 4. Geometry (Intersections of Solids). A "Pass" must be obtained in subject 2, and in any two of the remaining subjects.

It is not suggested that the examination is an infallible test of the candidate's suitability, but it does afford an opportunity of obtaining, at least, some indication of the ability and type of mind of those sitting for the examination, and a fairly broad view is taken in arriving at a decision as to which candidates are to be admitted and which not.

Those entering the School do so on a year's probation, and if they do not justify their admission during that period they are asked to leave, and are advised to take up some other calling.

I think it will be seen that it is not an easy matter for a student to enter our Schools, and that it is not the case that admission is granted haphazard to anyone who cares to ask it, irrespective of suitability for the profession of Architecture.

If the Architectural profession is overcrowded, it is certainly not overcrowded with well-trained men, and as evidence of this I may state that even during the worst times there is little or no difficulty in obtaining paid employment for those leaving our Schools on completion of training.

WILLIAM G. NEWTON,
President the Architectural Association.

34 and 35, Bedford Square,
February 17th, 1922.

Appointments Register.

The register contains the names and qualifications of a number of candidates for vacancies of a temporary and permanent nature in architects' offices. Members who require professional assistance of any kind are invited to give these candidates an opportunity of submitting their qualifications by informing the Secretary of their requirements. Enquiries made at 28, Bedford Square, either personally or by letter or telephone, Museum 942, will receive immediate attention.

Half-yearly Design Competitions.

The Quarterly Competitions have been discontinued, and in their place two half-yearly Design Competitions have been instituted, each of the value of £40, open only to Licentiates and Students of the Society.

JURY OF ASSESSORS.—Mr. Percy B. Tubbs, L. Sylvester Sullivan, H. M. Robertson, and Thos. Wallis.

Each Competition is divided into two parts, as follows :—

PART I.

A preliminary sketch design competition for which the subject will be set and the designs assessed by a jury who will designate a maximum of twelve competitors to enter for Part II. of the competition.

Fourteen days to be allowed for preparing the sketch designs.

PART II.

A final design competition of a more advanced character restricted to the twelve selected candidates.

Eight weeks to be allowed for preparing these designs.

These competitions will be conducted, the subjects set, the designs assessed, and any awards made by the Jury of Assessors, who will arrange for a criticism of the designs.

Any awards made may be used by the winners for any architectural educational purpose approved by the jury.

CONDITIONS.—The general regulations of the Society as set out on page 144 of the Year Book, 1922, will apply to this competition.

DATES.—The Preliminary Sketch Designs for the First Competition (1922), must be delivered at the Society's headquarters not later than 6.0 p.m. on Monday, March 20th, and the Final Designs not later than the same hour on Monday, May 22nd, 1922.

The Preliminary Sketch Designs for the Second Competition (1922) must be delivered not later than 6.0 p.m. on Monday, August 7th, and the Final Designs not later than the same hour on Monday, October 9th, 1922.

SUBJECT.—The subject for the Preliminary Sketch Design in the First Competition (March, 1922), is as follows :—

“ENTRANCE GATES FOR THE GROUNDS OF A COUNTRY HOUSE.”—The frontage to be filled is sixty feet overall. The carriage-way gates are to be fifteen feet wide in two leaves, the height being left to the Competitors. Another gate or gates for foot passengers to be provided, the width and height being left to the Competitors. The piers and fences may be in brick, stone, metal or other suitable material. The gates must be in metal. Provision must be made for lighting both the carriage and foot passenger entrances.

DRAWINGS REQUIRED.—Eighth scale plan of the disposition of the piers, paths, curbs, carriage and footways, with spur stones (if any), and the crossings to main road. Half-inch detail of elevation (to be not more than forty-five feet long) shewing the gates, the suggested treatment of the fences on either side, and the foundation of one of the gate piers. The drawings must be executed in pencil and colour.

The subject of the Final Competition (Part II) will be communicated to the selected Competitors in due course. That of the Preliminary Design (Part I) for the Second Competition (1922) will be published in the *Journal* for July.

R.I.B.A. Colour Competition.

A sum of £200 has been placed in the hands of the President of the R.I.B.A. by an anonymous donor for the purpose of instituting a competition for a business building, facing on an ordinary London street, in which "colour" (of a permanent nature) would be the dominant feature.

The Competition will be open to all members of the profession, but it is earnestly hoped there will be a strong response by students of the Architectural Schools in London and elsewhere.

Competitors have a free hand as regards style, material and colour treatment. The ground floor might be a bank or insurance office, the remaining floors might be flats or offices. Three premiums (£100, £50 and £20) will be awarded to the best colour designs, irrespective of architectural excellence. A fourth premium of £30 will be awarded to the best architectural design. *Colour must be suggested by the use of permanent material only.* Designs in oil paint, fresco, scraffito, and so on, will not be admissible.

Designs must be prepared as actual working drawings, but shadows may be cast where they would actually occur.

Premiated designs to become the property of the donor. The authors may, if they desire, make copies of their own works.

The successful designs will be published.

Drawings:

- (1) Elevation to $\frac{1}{8}$ -inch scale.
- (2) Detail of Entrance or portion of Top Storey to $\frac{1}{2}$ -inch scale.
- (3) Section to $\frac{1}{8}$ -inch scale of front wall, showing the depth of reveals, also the depth of any recessed features.

Assessors: SIR EDWIN LUTYENS, R.A.; T. E. COLLCUTT, Esq., P.P.R.I.B.A.; Professor GERALD MOIRA; WILLIAM WALCOT, Esq. Should either of the Assessors be unable to act, the President will nominate one in his place. The designs, by the courtesy of the Royal Institute of British Architects, will be exhibited at 9, Conduit Street, W.1, after the award has been made.

The Competition will be conducted under the Regulations of the R.I.B.A. in so far as these are applicable. Each design must be accompanied by a declaration signed by the competitor, or joint competitors, stating that the design is his or their own personal work, and that the drawings have been prepared under his or their own supervision. A successful competitor must be prepared to satisfy the Assessors that he is the *bona fide* author of the design he has submitted. No design shall bear any motto or distinguishing mark; but all designs received by the Secretary, R.I.B.A., 9, Conduit Street, W.1, not later than May 21, 1922, will be numbered by the Secretary, R.I.B.A., in order of receipt.

Further particulars and a diagram of elevation and plan can be obtained from the R.I.B.A. at 9, Conduit Street, W.1, or from the Society at 28, Bedford Square, W.C.1.

MALVERN PUBLIC BATHS.

The Council of The Society of Architects has accepted an invitation from the Malvern U. D. Council to join with the R.I.B.A. in suggesting a list of architects from whom the Baths Committee may select an architect to collaborate with a surveyor and advise in the erection and construction of Public Baths in that district. In the meanwhile the proposed competition is in abeyance. The President of the Society has nominated Mr. Alfred J. Taylor, of Bath, and Mr. H. M. Robertson, of London, for inclusion in the list.

R. A. Ateliers Competition.

Mr. H. Greville Montgomery, Director of the Building Exhibition, with that kindness and generosity which characterises his interest in architectural education, in October last placed a sum of £250 at the disposal of the R.A.A. Patrons Committee, of which sum £200 was to provide prizes for designs for a lay out and stalls at Olympia, and the balance to go to the general fund.

A design competition was then arranged and held, open to any Members of the affiliated Ateliers, and the jury of Assessors consisting of the Patrons of the Ateliers made the following awards:—

Part I. Lay out: First premium, £50, R. Murray, First Atelier; Second premium, £20, C. W. Box, Billerey's Atelier; Third premium, £10, S. Natusch, First Atelier. Mentions: B. Frazer, W. J. Allcoen, W. W. Wood.

Part II. Stalls: Six premiums of £20 each, J. Godwin (two) and B. Fraser, First Atelier, and J. H. Greenwood, R. J. Troup and A. V. Farrier, A. A. Atelier.

The Competition drawings were exhibited, the prizes awarded, and a criticism given by Mr. Arthur Davis, F.R.I.B.A., at 28, Bedford Square, on January 31, 1922, and the designs have been placed at Mr. Montgomery's disposal for display at the Building Exhibition at Olympia in April next.

The Travelling Studentship, 1922.

(£25 and a Gold Medal.)

The conditions governing the Travelling Studentship for 1922 are set out on pages 146 and 147 of the Society's Year Book. Licentiates and Students of the Society are reminded that the competition drawings have to be delivered before 6 p.m. on May 1st, 1922.

SUBJECT.—“THE SHOP-FRONT OF A RETAIL BOOKSELLERS' AND NEWS-VENDORS' ESTABLISHMENT.”

Necessitating the adequate display of books and periodicals.

The width of the frontage to be filled in is fifty feet between the party-walls, which latter are eighteen inches in thickness. Access to the upper premises is not to be considered in the design, which is exclusively concerned with the shop front.

The height from the ground floor (which is on the pavement level) to the underside of the Bressumer is fixed at sixteen feet, but the height to the level of the first floor is left to the competitor.

DRAWINGS REQUIRED. Plan, elevation and section to half-inch scale, showing any recesses from the street line which may be introduced, and the treatment of show-cases and of any intermediate piers, to the superstructure.

The elevation must show the treatment of the shop-front up to the first floor sill level.

The drawings are to be executed in pencil and colour and are to be sent flat.

The Society of Architects.

Sessional Arrangements, 1922.

Subject to additions and revisions of which notice will be given in the Journal.

Mar. 1	Entries close for April Membership Examination.	June 3	Victory Scholarship Competition Part I.
„ 2	Practice Committee 3.30 p.m.	„ 5	Whit Sunday.
„ 8	Masonic Lodge 4.30 p.m.	„ 6	Bank Holiday.
„ 9	Council 5 p.m.—Ordinary Meeting 8 p.m. Lantern Lecture on "Stained Glass," by Mr. J. A. Knowles.	„ 8	Practice Committee 3.30 p.m.
„ 22	Membership Examination opens.	„ 15	Council 5 p.m.—Ordinary Meeting.*
		„ 24	Midsummer Day.
		July 15	Victory Scholarship Competition, Part II.
Apl. 6	Practice Committee 3.30 p.m.		
„ 11	Building Exhibition, Olympia, opens.	Sept. 1	Entries close for October Membership Examination.
„ 14	Good Friday.	„ 7	Council Meeting 3 p.m.
„ 16	Easter Day.	„ 22	Membership Examination opens.
„ 17	Bank Holiday.	„ 29	Michaelmas Day.
„ 20	Council 5 p.m.—Ordinary Meeting.*	„ 30	Last day for delivering Nominations for Council.
„ 27	Building Exhibition closes.		
		Oct. 5	Practice Committee 3.30 p.m.
		„ 9	Last date for delivering Ballot Papers for Council Election.
May 1	Entries close for "Victory Scholarship" Competition.	„ 11	R. A. Chapter, 5 p.m.
„ 3	Membership Examination closes.	„ 12	Council 5 p.m.—Special General Meeting 8 p.m. Election of Council for 1922-23.
„ 4	Practice Committee 3.30 p.m.	„ 31	End of Session.
„ 10	Masonic Lodge 4.30 p.m.		
„ 11	Council 5 p.m.—Ordinary Meeting.*	Nov. 3	Membership Examination closes.

* The time and other details of the Ordinary Meetings will be announced in the Journal.

Member's Requirements.

Offices or practice required by an established Architect and Surveyor, three to six rooms or a house suitable for conversion and preferably in the West Central District of London.—Communications to P. H. G., c/o the Secretary, 28, Bedford Square, W.C. 1.

Ordinary Meeting.

An Ordinary Meeting of The Society of Architects will be held at 28, Bedford Square, on Thursday, March 9th, 1922, at 8 p.m., for the election of new members, etc. At the conclusion of the formal business, Mr. J. A. Knowles, of York, will give an illustrated lecture on "Ancient Painted Glass."

Victory Scholarship Fund.

Donations to this fund have been received from Mr. Percy B. Tubbs (second donation) and Mr. R. H. Cunliffe, which are included in the sum of £734, the amount at which the Fund at present stands.

It is hoped that members who have not yet subscribed will each contribute not less than five shillings per head before April, so that the Fund may benefit by offers of contributions made on this condition.—(See *Journal*, February, page 81 ante.)

Year Book, 1922.

A copy of the Year Book containing the Register of Members and the Rules and Regulations of the Society has been posted to every member. Any member who has not received a copy is requested to communicate with the Secretary at 28, Bedford Square, W.C. 1.

The reference to "Waygood-Otis Ltd.," in the alphabetical index should read "Waygood-Otis Ltd., 54-55, Fetter Lane, E.C. Waygood London 2001 Holborn," and not as printed.

The Architect and the State.

QUESTION IN THE HOUSE OF COMMONS.

Mr. Hopkins (S. E. St. Pancras, C.U.) asked the Minister of Health if his attention had been called to the address entitled "The Architect and the State," which was delivered to the Society of Architects on January 12th, by the Director-General of Housing, and what action he proposes to take in the matter.

Sir Alfred Mond stated that his attention had been called to the address in question, in which he gathered that the Director-General suggested that architects and others had not fully availed themselves of the opportunities which their participation in the housing scheme afforded them. He (Sir A. Mond) was afraid there was ground for thinking that this was true of most of the parties concerned in the housing scheme, and he did not think that any action on his part was required as regards the Director-General of Housing, whose services had been of the utmost value to the State.

—*Liverpool Mercury*, 16.2.22.

THE
Journal
OF
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Including Transactions and Architectural Notes.

No 6. Vol XV.

APRIL, 1922.

New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.



RAVENNA: THE BASILICAN CHURCH OF S. APOLLINARE IN CLASSE.

(From Messrs. Batsford's new edition of Baillie
Fletcher's "History of Architecture.")

Notes on New Books.

Many of us must confess to a secret, an inexplicable regard for people against whom we were warned often enough by the best-meaning of friends. They may have been denounced as disloyal and mischievous, or found merely unimaginative, or over-imaginative; we may even agree that they are stained with all these vices at once: yet does not our heart beat loud at each meeting? and when one vanishes, are our regrets any the slighter?

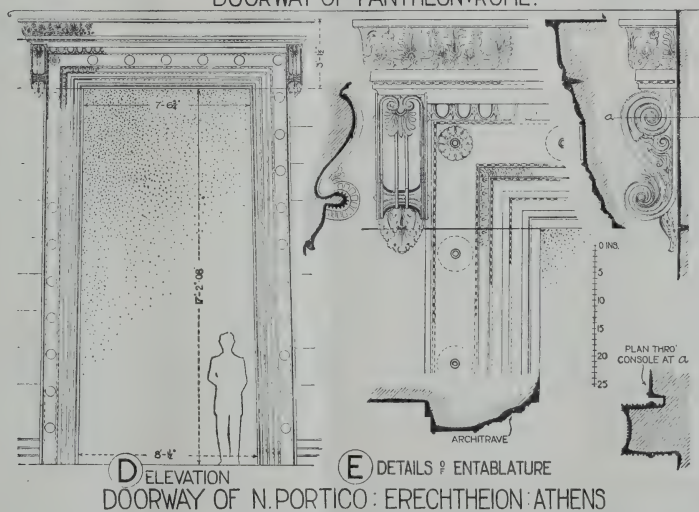
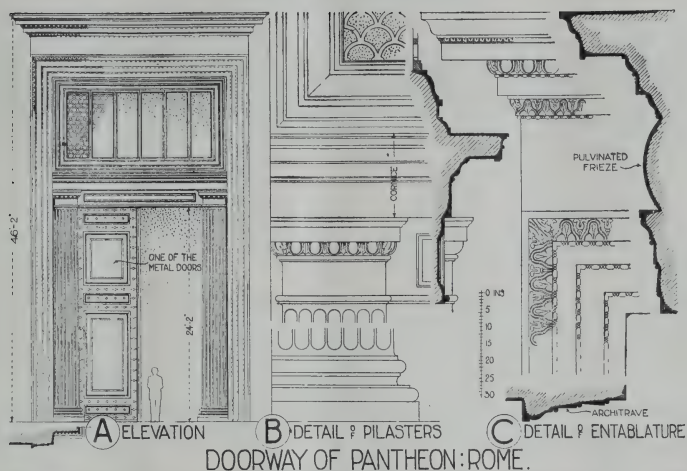
*The History who was wont to bear the name of Banister Fletcher on his back has long been gone from our sight. Many of us had permitted ourselves a moment of uneasiness concerning him. Whispers went about that he had met with an inclement fate in the cyclones of industry; others reassured us that he had merely sought an inaccessible seclusion to gather new strength, and to improve his appearance. We have recently had the opportunity of welcoming him back, and, as his coat of fashionable blue was divested of the coarser travelling wraps, he certainly appeared vastly the better for his temporary retirement. We recognised each other at a glance; one gathers there was a little emotion on both sides; indeed, he was always one of those unconfessed favourites of which we have just spoken. We gently opened him and found him much increased in bulk: not only had his illustrations been carefully done again, and a more dignified writing devised for their titles, but the text of each page was increased by one-third, and almost two hundred added to their number. The thought at once occurred to us that his innocuous dog-ears must have overheard the strictures made by our teachers upon the completeness and veracity of his contents. They never, we know, looked upon him with a particularly friendly eye; yet we remembered with a half-smile how each one of us would, as if by instinct, disregard their warnings and turn to him as our best, our safest, friend. But then he knew so much more than they. It is true that he was apt to be dogmatic and somewhat dictatorial, and openly professed to have exhausted all sources of human knowledge, from Stonehenge to the Aldwych; as one who had travelled everywhere and seen everything, he required to be taken with a pinch of circumspection. On the other hand, nothing easier of access had ever been contrived by mortal ingenuity, and we gladly submitted to the perils of sophistication in exchange for a little of that fund of convincing knowledge.

He smiled at us with all his handsome illustrations as we glanced over him again after years of separation; many a new one was discovered of which we reproduce one, an interior view of the famous S. Apollinare in Classe, with the portraits of Ravennese bishops forming a continuous band immediately over the arches, and, in the distance, the well-known mosaics curving over the apse. A typical example of his general expansion is afforded by the photographs of models of continental cathedrals, which have been increased from five in his last edition to eleven in the present.

As for the drawings, we have often deplored their exaggerated comprehensiveness and consequent illegibility. This defect does not appear to have received much thought, but the illustration of two doorways which we print will sufficiently indicate the changes that have been made for the better. Apart from the cleaner lettering one finds the insertion of figured dimensions useful, and that outline of the human form which at once gives scale to each drawing; the profiles are better disposed, and the mechanical half-tone dotting dispensed with. Each plate has, in addition, been consecutively paginated with the text, which is something of an innovation in book-production. It is needless to say that the charming fellow has our warmest welcome on his return.

B.

* A History of Architecture on the Comparative Method, by Sir Banister Fletcher, F.R.I.B.A., F.S.I., F.R.G.S., F.R.S.I. Sixth Edition, completely re-written. London: B. T. Batsford, Ltd. Price two guineas.



(From Messrs. Batsford's new edition of Banister
Fletcher's "History of Architecture.")

Drawing in Pencil.†

Modern "process" methods of reproduction have popularised the art of pencil drawing, which it is the aim of this book to encourage. Its advocacy of making finished drawings in the studio from notes taken on the spot may appeal possibly to architectural draughtsmen, but success must largely depend upon the amount of the preliminary work done from nature. Studio-finished drawings often lack that vigour and vitality which are the charm of the direct pencil sketch, as is evidenced by the fact that the best drawings reproduced in this book appear to be done directly from the subject.

The author reminds us that "art" is a convention, and surely the conventional use of the pencil is to produce the effect of a line rather than a stippled tone? On page 46, however, we are told that even solid objects should be defined by some variety of tone devoid of limiting outline, a function of the brush rather than of the pencil.

The author's philosophy is occasionally involved. For instance, he tells us in one place that "each stroke should be emotional rather than precise," and elsewhere that "the interest in pencil drawing is rather more intellectual than emotional." Is not this a question of temperament rather than of rule, because to some a drawing which does not arouse emotion is not a work of art.

Let the student study not only books but the work of the best draughtsmen and then express himself in his own way. As Whistler used to say, there is no secret in drawing, "the secret is in doing it."

H. F. T.

Showman v. Architect.*

THE PLATE GLASS CONTROVERSY.

The question of plate glass has been the subject of heated controversy on more occasions than one, and has even been part of an inquiry and report by a Government Committee.††

The evidence given before this committee by traders discloses no great diversity of opinion. Though some did not insist upon it, others attached capital importance to as wide and uninterrupted an expanse of glass as possible, on the ground that for their particular businesses a great display of goods is essential, and that by this means they look to capture the custom of people promenading in the street. Some of them asked for as much as 60 feet in width of glass between supports, with a minimum of 40 feet.

The architects, in their evidence, pointed out that it was by no means proved that this great expanse of glass was necessary, even for the purpose of a draper's business, having regard to the fact that two of the most modern buildings specially built for this trade had window spaces of only about 18 feet, with piers of from 3 feet 8 inches to 7 feet 2 inches in width; and that whereas the tenants might change, or their views as to what was necessary for their trade might alter, the buildings would be permanent.

† The Art of Drawing in Lead Pencil. By Jasper Salwey. London: B. T. Batsford, Ltd. Price 10s. 6d. net.

* This analysis of the Plate-glass problem is reprinted from an able essay on *Shopfronts* by Mr. L. Sylvester Sullivan, F.S.Arc., A.R.I.B.A., which appears in "Specification" for 1922, and wherein he fearlessly treats of such recondite matters as reflection and condensation. The essay is illustrated with numerous scale-drawings and photographs.

†† Report of Committee on design for the completion of Regent's Quadrant. March, 1913. Wyman & Sons.

The committee, in that part of their report relating to the shop windows, recommended that the span between the piers should not exceed about 25 feet; the shop fronts should be kept back not less than 12 inches from the faces of the piers, but might project in the form of bays to a line 3 inches back from the face of the piers.

Mr. H. V. Lanchester, in his paper on the treatment of shops read before the Society of Arts, classifies attempts to solve the problem.

Firstly, the building is kept as light and open above as it is below, this being the natural treatment where all the floors are occupied for business purposes.

Secondly, the lower portion is treated as an arcade, the method for which there is most traditional precedent.

Thirdly, the form of design that suggests a deep beam, either solid or pierced, over the lower openings.

Fourthly, the setting back of the upper part from the line of the shop front, so that the latter has no weight over it. As the loss of area on the upper floors is involved, he says the adoption of the last method is infrequent.

In all cases he makes it an axiom that the upper portion of the façade should not receive a treatment emphasising its weight, or worse, concentrating it over voids below, and that for this reason the use of columns in such positions is to be deprecated. If kept fairly flat and simple the façade will carry itself over the voids much better than if cut up with strongly-marked forms.

In his evidence before the committee previously referred to he stated he thought a span of 36 feet between the piers was possible provided that the façade of the mezzanine floor above the ground floor was treated as a girder and all columns or pilasters over it were omitted. A masterly example of what he must have had in mind is shown in the premises designed by his firm for Messrs. Colnaghi & Obach in New Bond Street.

Mr. Selfridge, than whom there is, probably, no one with more knowledge of the needs of the trader, may be quoted in connection with this vexed question of plate glass.† He said: "The architect should really be the physician who prescribed the proper nourishment for the client's mind, and should be sufficiently positive to insist upon that treatment rather than be willing to be a party to doing the poor thing, simply because a client was a little arbitrary and, perhaps, entirely unintelligent upon the subject. . . . The architect, therefore, attempted the work with more or less of a free hand, knowing, for instance, that corner pier could be built, if he chose, of sufficient size and evident strength to appear to be able to carry that portion of the building, instead of feeling that he must make that corner a piece of plate glass which, architecturally, was, of course, an abomination. He felt the whole building must be upon piers of sufficiently evident strength to carry the superstructure. He felt that nothing but plate glass on the ground and first floors, which was faulty in construction as far as the apparent strength of the building went, would be a monstrosity which he was not required to subscribe to, and in very many cases he questioned whether any self-respecting architect would be willing to produce a building of that kind"—and later he said that "the building should dignify its contents whatever their nature."

All this has been said by architects over and over again for years past, but it is a little distressing that it should have needed that open freshness of mind which blows with the breezes from across the Atlantic to ventilate its truth and emphasise it for us.

† Address on "Architecture and Commerce." Architectural Association. February, 1921.

Building Materials.*

This book differs from those generally written under this title for the young architect or builder. According to the preface special stress is laid on the exact examination of the materials for their constructional strength under different conditions, and their composition as revealed by chemical analysis, and by the microscope. It is written in a readable style, but the description of quarry stones would have been clearer if it had been accompanied by a table showing the order of the strata a tabular view appeals to the eye so much more than a long description. With regard to the weathering of stones it is pointed out that the most porous stone is not necessarily the worse affected by frost. If the porosity exceeds a certain value it is suggested that the voids allow of the expansion of moisture into ice without disintegration necessarily following. Also that those sandstones which have calcite as the binding material for the grains are less permanent than those in which insoluble silica or secondary quartz is the binder. The use of preservative compounds is described, but there appears to be some doubt as to their efficiency. Specific gravity is referred to, although the difference between that and density is not made clear. The composition and testing of Portland cement receive rather full notice. Other building materials are dealt with, but all of them chiefly from the chemical and theoretical side.—H. A.

Kidder's Handbook.†

If one book could contain all that an Architect wants to know of construction where calculation is involved, it would surely be found in this book. After a section on practical mathematics, there are 31 chapters by different experts on special branches, such as foundations, cements and concrete, walls and footings, retaining walls, piers and buttresses, arches, stresses in beams and strength of iron and steel, riveted joints, columns, beams and girders, mill and warehouse construction, fire-proofing, reinforced concrete, roof trusses, wind bracing, domes and vaults. Then follow appendices on heating and ventilating, tall chimneys, hydraulics, plumbing, gas-fitting, lighting and illumination, electrical work, architectural acoustics, and miscellaneous data, but a mere list of contents would give no idea of the amount of matter contained in the book. With a number of writers on allied subjects, there must necessarily be some amount of repetition, but there is not more than sufficient to make each section complete in itself. In the section on Foundations it is pointed out that extending the concrete to twice the width on one side of a concentrated load that it has on the other, with a view of reducing the pressure on the soil, is of no value, as the maximum pressure remains the same. Some useful notes are added on cantilever grillage for heavy foundations. Some novel points for tree-trunk piles are illustrated that accord with American practice on poor soils, but they are not applicable to English practice. In the section on columns several illustrations are given of methods of connecting rolled joists to cast-iron columns, but no warning is given as to the disuse of cast-iron columns in modern building construction. The section on domical and vaulted structures will be of great interest to the architect, as so little is available in the literature of our own country. The section on architectural acoustics will also be found interesting, but just as one is expecting some practical hints of definite use the subject is switched off to a list of specific gravities of various substances, weight of steel bars, &c. The notes regarding architectural competitions, standard documents, and registration show very similar characteristics to those advocated for many years past by The Society of Architects. In the list of Foreign Architectural Societies a grave omission occurs; The Society of Architects is not named, although the list includes the Royal Institute, the Architectural Association, and many local societies in provincial towns of Great Britain and its dependencies. The work is on the whole better suited for reference by experts than as a guide for the ordinary practitioner. The style of writing and the nature of the data are essentially American, and do not appeal very strongly to the British Architect. An author acting alone would not have so wide a grasp as the contents of this volume include, but what he did write would probably be more connected and easier to digest.—H. A.

*BUILDING MATERIALS: Being an introduction to the study of the Principal Materials used in Building Construction, by A. P. Laurie, M.A., D.Sc., etc. Edinburgh: Oliver & Boyd, London: 33, Paternoster Row, E.C. 1922. Post 8vo., pp. 188.

†THE ARCHITECTS' AND BUILDERS' HANDBOOK. Data for Structural Engineers, Contractors and Draughtsmen. By the late Frank E. Kidder, C.E., Ph.D. Compiled by a staff of specialists and Thomas Nolan, M.S., A.M., Editor-in-Chief. Seventeenth edition, enlarged. New York: John Wiley & Sons, Inc. London: Chapman & Hall, Ltd., 1921. Limp roan, thick post 8vo., pp. 1907. Price 40s. net.

The Hamlet of Ideas.

The opening of the "Daily Mail" Model Village at Welwyn Garden City took place on Thursday, March 2nd, 1922, when Lord Haig unveiled the village sign and record stones. The model village is the logical conclusion, so to speak, of that part of the "Daily Mail" Ideal Home Exhibition at Olympia, at which it was customary to exhibit specially designed model cottages of a temporary character. The houses built at Welwyn being of permanent nature will, when they have served their exhibition purpose, be handed over to their prospective inhabitants.

That the exhibition at Olympia in no way suffers from the absence of the model cottages testifies to the increasing popularity of the whole scheme.

The Society of Architects was represented at the opening of the exhibition at Olympia and of model village at Welwyn.

Mural Decorative Art.

With a view to promoting the Arts of Design connected with the decoration of buildings, the Royal Academy propose to hold an Exhibition of Decorative Painting and Sculpture at Burlington House in January and February, 1923, with the twofold object of directing attention to the important part which the arts of Painting and Sculpture should take in architectural schemes, by showing what British artists can contribute to this end when suitable opportunities are offered to them; and of suggesting to younger artists and students the great possibilities of these Decorative Arts for the expression of the thoughts and feelings of the community at each turning-point in its history.

It is hoped that civic authorities throughout the country will take a prompt and practical interest in the scheme of the Exhibition, which will include works in painting, mosaic, tapestry or sculpture for the permanent decoration of buildings and designs or cartoons in drawing or painting, models in plaster, etc., for such decorations.

Decorations designed as suggestions for imaginary buildings or spaces would be acceptable for the Exhibition. At the same time, with a view to the practical encouragement of artists in this direction, the President and Council of the Royal Academy would be glad to know of any schemes of decoration which municipal or other authorities either intend or might find it possible to put in hand, and would hope to receive information, with details of the measurements, lighting, etc., of any definite spaces in buildings which would be available for decoration with subjects of local or national interest by an artist or artists selected by open competition; it being understood that such authorities would not be bound in any way to accept any of the competing designs.

The London County Council has agreed to place certain wall spaces in its new County Hall at the disposal of four of the principal Art Schools of London, for decoration by the Students under the supervision of the Masters of these Schools. The Committee of the British Empire Exhibition, 1924, will also, it is understood, provide a large extent of space for mural decoration in the new Exhibition Buildings at Wembley Park. It is hoped that other municipal authorities will follow these examples. All communications should be addressed to "The Secretary, Royal Academy of Arts, Piccadilly, London, W. 1."

Proceedings of the Society.

An Ordinary Meeting of The Society of Architects was held at 28, Bedford Square, W.C.1, on Thursday, March 9th, 1922, at 8 p.m.

Mr. GEO. H. PAINE, a Vice President, took the Chair in the absence of the President. The minutes of the previous meeting, as printed in the Journal, were taken as read, and were confirmed and signed.

The following announcements were made:—Nominations: For Fellowship, 4; for Membership, 1.

ADMISSIONS:—

AS LICENTIATES.—ARMITAGE, CHARLES, Post Office House, Infirmary Street, Leeds; ELFORD, PERCY WILLIAM TAPSON, 12, St. George's Terrace, Stoke, Devonport; KERR, HUGH VICTOR, 22, Old Square, Lincoln's Inn, W.C.2; PARSONS, HERBERT HENRY, 5, Bouverie Square, Folkestone; VADNERKAR, V. V., 44, Hildrop Road, N.7.

AS A STUDENT.—CARDWELL, JOHN JOSEPH, 10, Christopher Street, Sunderland.

REINSTATEMENT.—FORREST, GEORGE TOPHAM, London, Fellow.

RESIGNATIONS.—COX, A. LAURENCE, F.S.I., 46, Knole Road, Bournemouth; WAUGH, E. H., Johannesburg.

DEATHS.—BINKS, H. PERCIVAL, Member, Hull (1914); EEDLE, FREDERICK JAMES, Member, London (1890).

LAPSES UNDER ARTICLE 57. — MEMBERS: A. CHAUSEE, 1433, St. Hubert Street, Montreal; W. C. F. GILLAM, 509, Richards Street, Vancouver, B.C.; A. L. MERCER, 1028, Haro Street, Vancouver, B.C.; F. MOUNTAIN, 711, North West Trust Building, Vancouver, B.C.; STUDENTS: T. S. BEACH, Charlton House, Halesowen; W. G. PARKIN, Hankow, China.

ELECTIONS:—The following Candidates, whose nominations had been previously announced and published, were submitted for election under Articles 12 and 17 of the Articles of Association, and were declared to be duly elected:—

AS FELLOWS.—ANDERSON, HENRY MCCLURE, M.S.A., Tientsin, N. China; TANNER, EDWIN JOHN, A.R.I.B.A., Carlton Chambers, 12, Regent Street, S.W. 1.

AS MEMBERS.—BASTO, ANTONIO HERMENEGILDO, A.R.I.B.A., 46, Cambridge Road, Battersea Park, S.E. 11; BROUGH, GEORGE DANOLE, 30, Lexham Gardens, South Kensington, W. 8.

Mr. J. A. Knowles, of York, then gave an illustrated lecture on "The Study of Ancient Painted Glass," which was followed by an interesting discussion. A hearty vote of thanks was accorded to the lecturer who replied to the points raised.

The proceedings then terminated.

Landlord and Tenant—Assignment of Lease—"Premises taken in their present condition"—Notice of Want of Repair after assignment—Repairs executed by tenant—Liability of assignee to indemnify him—Lockharts, Ltd., v. B. Bosen & Co., Ltd.—Law Times Newsp., Mar. 4, 1922; Astbury, J., Feb. 21.

A tenant, with the consent of his landlord, assigned the residue of a term, and accepted a low price, the premises being out of repair and the assignee accepting them "in their present condition." Subsequently the landlord sent a dilapidation notice, with which the assignee refused to comply. He also refused to carry out his contract, or to repay the tenant the amount which he had to expend in effecting the repairs. It was held by Mr. Justice Astbury that the assignee was liable for the cost of the repairs.

The Loan Library.

It is gratifying to note that the Loan Library is being utilised to a greater extent every day by members of the Society, and it would become still more widely popular if members, especially those residing in the provinces, had a clearer realisation of its unique facilities which it provides for long-distance borrowing. One wonders whether the fact is fully grasped that a collection of standard works, to which important additions are being frequently made, is at the disposal of members in the most far-off nook of the United Kingdom.

A supplement to the catalogue is under preparation, and in the meanwhile members may obtain copies of the present edition of the catalogue, so long as they are available. To supplement the latter, members should consult the lists of additions which are published periodically in the Journal.

Members interested in the Library will be glad to learn that the Council has recently allocated a substantial sum for the use of the Library Committee in filling notable *lacunæ* in the collections.

Gifts of new or second hand books or donations to the Library Fund will enable the Committee still further to extend this useful branch of the Society's work.

The following Book has been presented to the Loan Library during the month by the publishers:—

BUILDING MATERIALS. By A. P. Laurie, M.A., D.Sc., F.R.S.E., F.C.S., Principal, Heriot-Watt College, Edinburgh; Professor of Chemistry, Royal Academy. Crown 8vo., pp. viii.-188, with 22 illustrations. Edinburgh: Oliver and Boyd, 1922. Price 6s. net.

The following books have been purchased by the Council:—

GARDEN CITIES IN THEORY AND PRACTICE. By A. R. Sennett, M.I.C.E., Hon. Librarian, Automobile Club. Thick 8vo., 2 vols., pp. xxvi.-1,404, with 350 illustrations. London, George Allen & Co., 1905.

CITY DEVELOPMENT. By Patrick Geddes, Professor of Botany, University College, Dundee; President, Edinburgh Institute of Sociology. 4to., pp. 231, with 136 illustrations, folding plan, etc. Edinburgh: Geddes & Co., 1904.

SCOTTISH ARCHITECTURAL DETAILS. By John W. Small, F.S.A. Folio, 65 plates. Limited to 400 copies. Stirling: Eneas MacKay, 1901.

THE CARE OF ANCIENT MONUMENTS. By G. Baldwin Brown, M.A., Watson Gordon, Professor of Fine Art in the University of Edinburgh. Demy 8vo., pp. xiv.-260. Cambridge: The University Press, 1905.

AMERICAN COUNTRY HOUSES OF TO-DAY. By Samuel Howe, 4to., pp. xx.-424, with many illustrations. New York: The Architectural Book Publishing Co., 1915.

Addresses Wanted.

The Society's Journals sent to the following members, &c., have been returned through the post. The Secretary will be glad to hear from anyone who can put him in communication with any of these members.

MEMBERS.—D. T. Barclay (Tipton), F. A. Coyle (Consett), D. J. Fyvie (London), C. A. Hall (Bedford), E. F. Hill (Newbury), T. E. S. Pitt (Yeovil), A. W. Street (Corsham), E. C. Surtees (Barnard Castle), E. F. Tomlins (Golders Green).

STUDENTS.—S. H. Collins (London), S. J. C. Denning (Tiverton).

The Study of Ancient Painted Glass.

SOME NOTES ON A LECTURE BY JOHN A. KNOWLES.

Out of the numberless people who look at stained glass windows there are very few who deem them worthy of careful study. Mr. John A. Knowles, of York, read a paper before the Society on the evening of Thursday, March 9th, which was all the more engrossing because it came, not from an archæologist, but from an artist-craftsman to whom internal evidence alone is of value. Except when for a few moments he touched upon the subject of cost, in connection with which reference to old MSS. and accounts became unavoidable, the lecturer was occupied with the windows themselves from first to last.

The methods of design and manufacture, the distribution of the labour, the training to which designers were subjected; all these in turn grew intelligible and wonderfully alive during the examination of ancient examples in which lecturer and audience joined. After a little while they were able to identify alterations and enlargements and the repainting of old work, and to trace the various vicissitudes which have been the lot of less fragile things than windows from the beginning of time.

Cartoons, said Mr. Knowles, were, until the introduction of paper, drawn on a whitewashed board set up on trestles. Theophilus, a 12th century monkish writer on the various crafts, minutely describes this process in his *Artium Schemata*. Lead or charcoal was used to sketch in the outline, the details of the flesh portions being painted in with red or brown, and the lines of the lead drawn over with a brush. The colours of the various pieces were indicated by means of a letter. Clearly the designer, if his cartoon were of any magnitude (such as the gigantic figures of St. Christopher which were at one time highly popular on the Continent) could see only a small portion of the whole. Besides, the storage of cartoons drawn upon such a material was a cumbersome affair, and its difficulty did not a little to encourage the repeated use of the same cartoon in different windows, but oftener in different parts of the same window. The figures of kings, prophets and saints at Chartres are all alike in design, though coloured with the greatest possible variety so as to conceal such likeness.

One would expect the introduction of manageable paper cartoons to put a stop to this practice, said Mr. Knowles; but such was certainly not the case. This time the storing away of rolled designs was such an easy matter that their authors could not resist the temptation to use them over and over again at intervals. He showed how in the North clerestory windows at Great Malvern the same cartoons had been made to do duty, with some slight changes, for the figures of nine Religious, eight Bishops and Archbishops, and two Kings.

Sometimes an entire group was used over again and made to represent a totally different one in a new scene. A new background, a fresh colour-arrangement, the accessories proper to the changed subject: all this could be done by comparatively unskilled hands. Many examples of this practice were to be seen in the St. William Window at York. One had, nevertheless, to allow for the tendency of every artist to develop a mannerism, or to fasten on a favourite attitude, in tracing the history of such repetitions. Designers who had a large practice were, of course, the most frequent offenders in this respect.

In the St. William window at York the figure of the woman poisoned by eating a frog cooked in bread (panel 66) becomes the dropsical woman cured at the shrine in panel 101. The designer of the window evidently thought that there was so little difference between a Pope receiving a letter and the same individual sending one that the same drawing would very well do for both (panels 11 and 102), and, if the heads of the spectators in the background were altered, no one would be any the wiser at the economy practised.

When the same cartoon was used for windows in different churches, the similarity between the latter was not so easily attributable to the designers' conformity to type. The lecturer showed a figure of St. Christopher, the cartoon of which had evidently been in constant use for over eighty years. It was taken from the church of St. Michael-le-Belfrey, at York, executed about 1530, and its prototype, which was to be found in All Saints, North Street, dated back to about 1450. Two other well-known York windows were, both of them, more or less condensed versions made to fit a three-light and a five-light window respectively, of a set of cartoons for a window which has not yet been identified, and most probably no longer exists.

These two windows were firstly the east window of Holy Trinity, Goodramgate, which was painted from old drawings originally made to fit longer lights. These had to be squeezed together to such an extent to get them into the shorter lights that the canopies sit on the top of the halos of the saints shown in the glass, and St. Alphaeus loses the top of his head in the process. The same cartoons, condensed to three lights, have again been used to paint another window in St Martin's, Coney Street.

Glass-painters, he hastened to add, were not the only ones who thus repeated their designs. The practice was common in all the arts. Raphael painted his Madonna of the Chair twice. Holbein, Rubens, and Murillo continually did the same thing. Holman Hunt painted his "Light of the World" several times over.

By comparing the various subject panels in a large window such as the St. William window at York, one discovered how young designers were trained by piecing together figures, heads, and other details in cartoons by the master so as to form other subjects. They were next entrusted with the less important figures, such as canopy angels, and small figures of saints in the tracery, until finally they were able to design entirely new compositions.

Old windows showed that glass of all periods from the earliest times to the present day was never fired in the kiln more than once. This was proved by the accidental scratches caused by careless handling before firing, which removed both traced lines and shading down to the bare glass. The temptation to fire the glass more than once, Mr. Knowles explained, arose when the less experienced painter began to apply the enamel after the traced outline had been drawn on the glass with a gum water composition. This outline, at the hands of a novice, was easily blurred or even, in the case of a more delicate line, wholly removed, unless it had been previously fixed by some such method as a previous firing, or the application of a hard varnish.

Speaking of the authorship of glass-paintings generally, Mr. Knowles pointed out that there was no foundation for the common belief that the masterpieces of mediaeval art were produced by a single individual from start to finish. Quite the contrary was the case, and a minute subdivision of labour was generally adopted. Apart from the vast amount of external evidence which clearly bears out this important fact, one has the incontrovertible testimony of the windows

themselves. The lecturer showed two fragments from the St. William window in York Minster which we reproduce (Fig. 1). The head on the left represents the King of Sicily, and forms part of panel 27; that on the right is a portrait of the Lord Mayor of York, and occurs in panel 45. The most superficial study of the heads will reveal two important facts, viz.: the general similarity that exists between them, and the immense executorial superiority of the former. From such observations it is easy to gather that more than one painter was employed on each window, and that the relative skill of the painters differed to a very great extent.



Fig. 1

(From a photograph in
Mr. Knowles' possession.)

There could be no more obvious contrast than that between the directness and reticence of the King's head and the exaggeration of the other. Among the gravest defects of the latter one the lecturer pointed to the over-modelling of the features, especially of the zygomatic arch in the cheek, and the disagreeable inflation of the eyelids. The quality of the line, too, is far more highly expressive and better modulated in the King's head than in the other: one has only to look at the subtle and infinitely varied stroke with which the outline of the nose is indicated together with its projection. Nor does the author of the Lord Mayor's head anywhere approach the actual tenuity of the other artist's line.

Speaking of the marks left upon their work by the glass-craftsmen, Mr. Knowles pointed out how, on closely examining the different pieces of glass of

which a window was made up, one frequently found that each one has been marked with a cross or some similar sign or letter. This was done to facilitate sorting out the pieces of glass belonging to the respective lights after they had all got mixed up in the kiln. The glass painter's name itself with the date were impressed on the inside of the leads where the glass fitted into the groove. This was done by having the required name cut on the wheels of the lead vice or mangle through which the leads were turned out, instead of the wheels being toothed or milled. Many interesting names and dates had been lost through the restoration of ancient windows being handed over to glaziers and others who, being ignorant of this method of signing work, destroyed the record with the lead.

Having dealt with the manufacture of the window, and installed it, as it were, in its position, Mr. Knowles proceeded to trace the history of the glass in subsequent years, and pointed out how invaluable was a sound knowledge of the technical processes, not only in identifying the artist, but in discovering every enlargement, curtailment, repainting or other change which his work has suffered at the hands of his successors. It is an unfortunate fact, said Mr. Knowles, that whenever, in restorations of ancient glass, historical research becomes necessary, antiquaries and archaeologists are always made the sole judges, and documents, heraldry, costume and other accessories drawn upon for information rather than the glass itself. He instanced a case in which an architect had, from the evidence supplied by the fabric, stoutly maintained a certain date for the erection of a portion of one of our cathedrals, although an antiquary cited innumerable documents in refutation of his theory. The architect was, of course, held up to the general ridicule as one whom no logic could bring to reason. Not long afterwards, however, the discovery of yet another document proved conclusively that the architect's contention had been the right one.

The east window of St. Margaret's, Westminster, provided a good example of enlargements and repaintings by eighteenth century artists on the top of early sixteenth century work. This window is traditionally said to have been intended for Henry VII. Chapel, but the lecturer was able to show that it can never have originally been made for the Abbey. Measurement proved that it was indeed far too wide to fit the lights of any of the windows in the chapel. The figure of Henry VIII. had been stippled dark down one side and the curtain behind him down the other, in the *chiaro-scuro* manner much adopted in the eighteenth century by painters in oil, as a means of obtaining an effect of projection. This was probably done by the younger Price, who restored the window so as to fit it for its former situation at Copt Hall. But such an effect of light and shade could not have been known to the artist who originally painted the window during the first quarter of the sixteenth century.

A very interesting illustration of the problems which awaited the historian of these works of art was taken by the lecturer from the East window at Great Malvern, in which the Passion of our Lord is represented. Whether this window was originally smaller than it is at present he thought it difficult to state conclusively: it was possible that the original canopy might have been destroyed, and a new one, copied from the original, inserted in its place. We reproduce (Fig. 2) the photographs of the two canopies to which Mr. Knowles referred.

The altogether different technique suggests that in this case the divergencies which one at once perceives cannot be due to the unequal skill of contemporaneous painters. The bottom canopy is part of the original work, and is a typical example of the productions of the York school. It is probably from the hand of John Chamber the younger, who died in 1450. The upper canopy is an addition or restoration by another and a later artist.

The deterioration of the architectural detail is the most pronounced characteristic of the later piece of work. The meagreness of the groining in the central space is very noticeable. For the loose but delicate scribbling wherewith the shadowed portions in the lower canopy are toned down, the upper substitutes either a coarse dull dotting, or cross-hatching. There is none of the firmness and sweeping continuity in the tracery of the upper example that makes every detail in the lower such unmistakably distinguished work. Nor has the author of the former design been able to resist a foolish impulse to scrawl a mass of lines on his pendants and bosses, whereas the author of the lower canopy limits any such work to the voids.



Fig. 2.

[Photo, Sydney Pitcher, Gloucester.

The conclusion of Mr. Knowles' address took the form of an eloquent plea for the systematic recording, by means of photography, of such old glass as our nation still possesses. The importance of photographic records for students of comparative archæology and architecture could not, he thought, be overstated. The inaccessible position of the glass made it necessary that every attempt should be made to form such records when it happened to be taken out for repairs: yet it was a common occurrence for windows to be taken down and refixed without any record being made, or without granting anyone interested in the matter an opportunity of viewing them closely. Photographs giving a general view of whole windows were of little value. They should be photographed panel by panel. The French Government issued a catalogue containing sixteen thousand photographs of buildings, carvings, details, glass and what not from all over France, and these could be bought in large sizes for a franc or two apiece. At York where hundreds of people came to see the glass alone, not a photograph nor a picture postcard was to be obtained anywhere.

It was a state of affairs which one could not but deeply regret. It was true, Mr. Knowles said, that the authorities of the Victoria and Albert Museum were carrying out very valuable work in this direction, but of a collective movement that embraced the whole of the sources there was as yet no sign in this country.

Mr. F. C. Eeles, of the Victoria and Albert Museum, thanked the lecturer for his reference to the work the authorities of the museums were trying to do. They had already photographed the whole of the glass at Canterbury Cathedral and Westminster Abbey, as well as that of several other churches. Unfortunately the means of public departments such as theirs were very limited. He was pleased to see a letter in the "Times" of that morning from Mr. F. Sydney Eden, of the Historical Monuments Commission, deploring the large quantity of stained glass which had until even a quite recent date disappeared from our churches to be sold in America or elsewhere, without any tracing or photograph being taken of it. The newly-formed Diocesan Advisory Boards would do a useful work in the future by putting a stop to this. Much remained to be done in the study of ancient glass in the way of identifying the work of the different schools. It was only by a close study of technique and methods such as the lecturer had shown that this could be done.

Mr. C. H. Whall asked the lecturer if he could say anything about the glass of St. Neots, in Cornwall, and the probable date of its execution. The lecturer, in the course of reply, stated he hoped none of those present would lose one whit of their admiration for old work, because of the fact that the mediæval artists were not above borrowing their designs and similar devices. As regards the glass at St. Neots this was somewhat of a puzzle to antiquaries. It was executed as late as 1530, but was in a style and technique of at least 50 years previous.* It was probably the work of an old man trained in the Gothic style, who was unable to absorb the new ideas of Renaissance drawing and painting, Gothic having since been abandoned in the rest of England, but probably lingering in remote districts, such as Cornwall. Another example of this was the windows of St. Michael-le-Belfrey Church, York, which, although painted at the very time the fine Renaissance glass of King's College, Cambridge, was being done, nevertheless did not show a trace of the new style, but were entirely Gothic in feeling and drawing.

* The windows are dated 1528, 1529, 1530, whilst one is dated 1577. There is some doubt whether this last date is not a later insertion.—J.A.K.

Notes of Recent Cases.

By W. VALENTINE BALL, O.B.E., BARRISTER-AT-LAW.

Law—Acquisition by Local Authority—Compensation Assessment—Voluntary or Compulsory Purchase—Effect of a Public on a Private Statute—Blackpool Corporation v. Sear Estate Company (1922) 1 A.C. 27 (House of Lords, November 8, 1921).

A Private Act of a Corporation passed in 1917 enacted that the Corporation should sell certain land to a company at a price to be determined, in default of agreement, by arbitration under the Land Clauses Acts. In 1919 a Public Act, known as the Acquisition of Land (Assessment of Compensation) Act, was passed, which provides that if by any Act, whether passed before or since 1919, land is authorised to be compulsorily purchased by any local authority, any disputed question is to be determined in the manner provided by that Act and not otherwise. In these circumstances a question arose between the Corporation and the company as to whether compensation was to be assessed under the Act of 1917 or that of 1919. The matter eventually came before the House of Lords, where it was decided that the compensation was to be ascertained in the manner prescribed by the Act of 1917, because (a) that Act embodied an agreement between the parties for the sale and purchase of the land, and the land was not "authorised to be acquired compulsorily"; and (b) that the general language of the Act of 1919 ought not, in the absence of clear words, to be construed as affecting the special provisions of the Private Act. It is this last ground which is of interest to surveyors and others who are concerned with the sale of land to local authorities. Many of these bodies have Private Acts enabling them to acquire property compulsorily, and terms specially favourable to the owners of property are often to be found in such measures—terms placed there, in all probability, at the instance of the property owners who may have gone to the expense and trouble of opposing the Bill in Parliament for the express purpose of protecting their interests. Lord Haldane enunciated the general principle which he said applied to the case: "Wherever Parliament in an earlier Statute has directed its attention to an individual case, and has made provision for it unambiguously, there arises a presumption that if in a subsequent Statute the Legislature lays down a general principle, that general principle is not to be taken as meant to rip up what the Legislature had before provided for individually, unless an intention to do so is specially declared."

Negligence—Articles which may be Dangerous for Children—Poisonous Shrubs in Public Park—Liability of Local Authority—Glasgow Corporation v. Taylor (1922) 1 A.C. 44 (In the House of Lords).

The plaintiff was father of a child of seven who was killed through eating the poisonous berries of a plant in a public park under the control of the Glasgow Corporation. The question was whether in the circumstances an action lay against the Corporation for negligence. The House of Lords held there was a good cause of action. The facts of this case are of a very special nature not likely to recur, but the decision was founded upon a principle of law which is of interest to everyone who has upon his land machinery or other articles which are attractive to young children. In *Latham v. Johnson* (1913) 1 K.B., 398, Lord Sumner thus stated the law: "The presence in a frequented place of some object of attraction tempting 'a child' to meddle where he ought to abstain may well constitute a trap, and in the case of a child too young to be capable of contributory negligence it may impose full liability on the owner or occupier if he ought as a reasonable man to

have anticipated the presence of the child and the attractions of the object." The principle here applies in cases where cranes and other apparatus which are at once dangerous and interesting to children are left in places to which children have access. They should at all times be carefully guarded.

Landlord and Tenant—Covenant not to use Premises otherwise than as a Private Dwelling House wherein no business should be carried on—Assignment—Sub-lease by Assignee—Breach of Covenant by Sub-lessee—Remedy of Landlord against Tenant—Berton v. Alliance Economic Investment Company (1922) 38 T.L.R. 187, K.B.D. Coleridge J.

A dwelling house was let upon the terms that it would not be used either by the tenant or his assignees, other than "as a private dwelling house wherein no business of any kind was carried on." The lessee assigned the lease, and the assignee sublet the premises. The sub-lessee converted the house into separate tenements, which he underlet to various persons on weekly tenancies. The head landlord having found this out brought suit against his tenant for breach of covenant. It was held that a breach of covenant had been committed, and that the tenant was only entitled to relief from forfeiture under the Conveyancing Act, 1881, if he gave an undertaking not to permit further breaches, and not to apply for an order under the Housing and Town Planning Act, 1919. As he refused to give this undertaking the landlord obtained judgment for possession.

Housing and Town Planning Act—Notice Requiring Works to be Executed—21 Days' Notice—Whether Reasonable—Ryall v. Cubitt Heath and Others, 38 T.L.R. 133, King's Bench Division.

Where a local authority give notice to an owner to execute works under the Housing and Town Planning Act, 1919, and demand payment for works which they carry out owing to the notice not having been complied with, the magistrate may consider whether the notice is reasonable or not. In so considering he may have regard to the general state of labour in the district, to the number of notices to be complied with by the owner, and to the time actually taken by the local authority in executing the work, and is not bound to consider each notice singly and disregard the existence of the others.

Housing and Town Planning Act—Work Done by Local Authority—Demand for Payment—Right of Appeal—R. v. Minister of Health, Ex-parte Rush 38 T.L.R. 264 (Lord Treviñin, Avory and Roche, J.J.).

In this case it was held that the right of appeal given to a landlord by S. 15 (6) of the Housing and Town Planning Act, 1909, against a demand for payment for work done by the local authority on his default in doing the work is not taken away by S. 28 of the Housing and Town Planning Act, 1919. The appeal is to the Ministry of Health. The Lord Chief Justice said: "It would be extraordinary if there was no appeal. It is suggested that the local authority may make an order that work shall be done in a man's house, may enter the house, do the work, and then demand payment without his being able to have their action reviewed. This is not so." The observation of the Lord Chief Justice is one with which every reasonable person will agree.

Housing—Government Subsidy—Increase of Subsidy—Whether Building Owner Entitled to Benefit of—Housing (Additional Powers) Act, 1919—Colbourne and Others v. Smith, Chancery Division, Eve, J., Times, Feb. 8, 1922.

Early in 1920, the plaintiffs arranged to build 77 houses under a building scheme, which entitled them to apply for a grant under the Housing (Additional Powers) Act, 1919. In April, 1920, the Borough Surveyor issued a certificate under which the subsidy payable in respect of each house was £160. In May, 1920, the builders contracted to sell one house when complete to the defendant for

£850, the Government subsidy to be taken in part payment. Completion was to have been effected in August, 1920, but, owing to labour troubles, it did not take place until March, 1921. In March, 1920, new regulations of the Ministry of Health increased the subsidy to £240, and if the house had been completed within 12 months of the passing of the Act, that sum would have been payable, but having regard to the delay only £180 was paid. Eventually, however, the Government paid a further sum of £60, so that the whole amount received by the builder was £240. A question having arisen as to the amount to which the purchaser was entitled, the builders brought the matter before Mr. Justice Eve by an originating summons. His Lordship having considered the facts, decided that the purchaser was entitled to the whole amount received by the builders, e.g., £240. In the course of his judgment he said that the amount payable was to be ascertained at a future time, and at the future time the Ministry stepped in and for the £160 originally in the certificate substituted £240, and that sum had actually been received before the summons came on to be heard. Incidentally, he observed that the increase from £180 to £240 had been made by the Ministry without any application by the builders.

Arbitration—Decision of Umpire—How Far Final—Attorney-General of Manitoba v. Kelly & Os—In the Privy Council, January 24, 1922; 38 Times Law Reports, p. 281.

Architects and surveyors are so often employed as arbitrators, or concerned with arbitration proceedings, that a general principle laid down in the above case cannot fail to be of interest to them. It is part of the ordinary law that where any question is by consent referred to the decision of an arbitrator, his ruling is final. To this rule there is this exception—that if an error appears on the face of the award, it may be set aside by the Court. In the case above mentioned, however, the Privy Council laid it down that if a specific question of law is submitted to an umpire for his decision, and he decides it, the fact that the decision is erroneous does not make the award law on its face so as to permit of its being set aside. If, however, a question of law has not been specifically referred to an umpire, but is material in the decision of matters which have been referred to him, and he makes a mistake, apparent on the face of the award, the award can be set aside on the ground that it contains an error of law apparent on the face of the award.

Public Health—Cleansing Cesspools—Refusal by Local Authority where Excessive Demands made upon them by a Ratepayer. Leck v. Epsom R.D.C. King's Bench Division, Lord Trevethin, L.C.J., and Ivory and McCardie, J.J. Jan. 11. 38 Times Law Reports, p. 275.

In this case (the facts of which are not of any general interest) it was decided that, where a local authority have undertaken the duty of cleansing cesspools, they are not bound to cleanse the cesspool of one particular individual free of charge with unreasonable frequency. If they refuse to cleanse without charge when the ratepayer has made an unreasonable demand they are not liable for penalties. The principle here laid down is of general application in the relationship between private individuals and local authorities.

War Memorials.

We in England, who have several years of feverish and highly productive activity behind us in the erection of War Memorials, may be permitted a philosophical smile at the spectacle of an American Sub-Committee, appointed by the Mayor of Boston to report on "The Form of Memorial to Soldiers, Sailors and Marines to be erected by the City of Boston," groaning in the throes of conception. We quote from that part of the report which deals very ably and thoughtfully with the question of general principles.

It opens by stating that it is the purpose of the Memorial "that when this War is forgotten, America shall live at its supremest as Greece lives, not by its wars, but by its Parthenon," and continues by tackling the central difficulty:

"Your committee gave much consideration to the question that goes to the root of the matter—should a memorial be a utility or a thing of the spirit? It received many suggestions of utilitarian objects; for instance, a boulevard through the tenement districts of the city or radiating from the centre to the suburbs; a City Hall with incidental buildings;—and these were many—for semi-private institutions dedicated to public use.

"The Committee was entirely prepared to admit that these and similar utilitarian objects are important civic institutions, and should be built by those particularly interested in such objects. But it is thought that such buildings would not themselves be memorials at all. They would and should be erected to house the object of the particular Institution. For instance, the City Hall should house in the best possible way the business of the City, a very important object; the community building should house in the best possible way the collective interest of the community in the many and various affairs of the community—a very natural and desirable thing. Each building might be exceedingly beautiful and effective for its given purpose. But neither would embody in itself the ideals with which America entered the war, the great ideals for which our youth went forward even unto death. Neither would embody these ideals any more than it would embody the religious aspirations of a nation or people.

"Nor could such structures be made memorials merely by a name or dedicatory inscription. The meaning of a name is soon forgotten, a dedication is soon unnoticed. Thousands have trod Washington Street this day. How many have thought of Washington? Thousands have passed buildings over whose doorways dedications have been carved. How many have noticed them? How many can repeat accurately a single dedication in one of our great cities?

"If those utilitarian institutions are not memorials in themselves, and cannot be made so, by name or dedication, they should not be foisted on the great emotional desire of the public to contribute to suitable memorials. . . .

"Turning away from the so-called memorials which are really in substance and in form utilitarian objects and taking up memorials in the true sense of the word, your Committee gave much consideration to the question of what phase of the war should be embodied, for war has many and varied phases, and the memorial of those phases should be correspondingly many and varied. For instance, we may wish to memorialise the great human qualities of courage and suffering, felt on both sides of the Atlantic, for they are great human qualities; thus the sculptured figure of the man who leads the charge across No Man's Land may express courage, while that of the bowed and broken mother may express suffering. We may wish to memorialise the triumph over our enemies as in those splendid Roman arches that symbolise the power and the dignity and the

triumph of ancient Rome—the spirit that their triumphal processions manifested with their captives. Or, lastly, we may wish to memorialise, as the Committee hopes, neither courage, nor suffering, nor triumph, but something which transcends them—the great spiritual ideals of right, justice and liberty with which America entered the war. . . . ”

So far, so good. One cannot help admiring the earnestness, the comprehensiveness of this preliminary passage, which reflects the care with which the recommendation has been arrived at.

The recommendation which forms the second part of this stimulating document contains a proposal for an island of approximately ten acres, to be built in the Charles River basin close to Harvard Bridge. The crowning architectural feature of this Memorial Island would be “ a high tower rising from a colonnade and containing a great carillon or chime of bells.”

Upon all this the Journal of the American Institute of Architects characteristically comments:—

“ Of course the plain truth is that the only real memorials are those which lie in the hearts of men and so far as modern times go, it is difficult to believe that any message can be carried far in this direction by any of the arts. It is a pathetic conclusion, yet what other is possible as one contemplates the endless appeal of and for everything under the sun from starving refugees in Syria to Debs in Leavenworth. . . . ”

Building Exhibition, Olympia.

APRIL 11TH to APRIL 27TH, 1922.

The Architects' Welcome Club and the social functions connected with it will be under the management of the Royal Institute of British Architects, The Society of Architects and the Architectural Association.

The Prince's Rooms at Olympia will be equipped as the Architects' Welcome Club, where newspapers and technical journals will be available for reference and light refreshments will be obtainable at tariff charges. There will also be a Presidents' room, and an inquiry office where an official will be in attendance daily.

On Friday, April 21st, at 3 p.m., there will be a reception in the Pillar Hall by the Presidents and Councils of the R.I.B.A., The Society of Architects and the Architectural Association, to Architects and their friends, followed at 7 p.m. by a Banquet, when representatives of the three architectural bodies, kindred institutions, public bodies, the building industry and Government Departments will be the guests of the Club. Tickets, price 12s. 6d. (not including wine), may be obtained by architects and their friends, including ladies, exhibitors, and any others who may desire to attend.

A number of popular lectures have been arranged for members of the public exhibiting at or visiting the Exhibition to interest them in architecture and building, and there will be an exhibition of cinematograph films illustrating various building and manufacturing processes every evening at 7.45 p.m. in the Large Conference Hall.

Complimentary season tickets of admission to the Exhibition may be obtained from the Organising Secretary, and through the generosity of the Organisers of the Exhibition special admission tickets to the Exhibition will be available to architects, the use of which will result in the payment of the cost of admission (1s.) on each ticket to the Architects' Benevolent Society.

Communications on any matters connected with this programme should be addressed to the Secretary, Royal Institute of British Architects 9, Conduit Street, London, W.1., who has kindly undertaken the duties on behalf of the Joint Committee of the three architectural bodies.

Unification and Registration.

A circular issued by the Council of the R.I.B.A. states *inter alia* that the present position is that the Institute and the Society have discussed a provisional scheme for the absorption of the Society into the membership of the R.I.B.A., but that no binding decisions of any kind have yet been made. The members of the Institute are appealed to by their Council to suspend judgment pending the publication of the ultimate conclusions of their Council on the whole subject, and in the meantime to ignore the agitation set on foot by certain members of the R.I.B.A.

We are glad to feel that members of the Society have such confidence in their representatives on the Unification and Registration Committee and in their Council as to be able to await with what patience they may, an opportunity of agreeing or disagreeing with any proposals which the Council of the Society may presently tentatively approve with the Council of the Institute.

Notes from the Minutes.

COUNCIL DINNER TO THE PRESIDENT.—Past and present members of the Council will entertain the President, Mr. E. J. Sadgrove, to Dinner at the Café Royal on April 20th.

BUILDING EXHIBITION, OLYMPIA.—The Architects' Welcome Club, organised by the R.I.B.A., the Society and the A.A., has arranged a programme of meetings and social functions during the Exhibition, including a reception followed by a dinner on April 21st.

VICTORY SCHOLARSHIP FUND.—Local Hon. Secretaries are to be invited to co-operate in raising the balance required to complete this fund which is the Society's Memorial to the members who fell in the war, 1914-18.

BEAUX ARTS COMMITTEE.—A conference of representatives of the Committee and of the Society has been arranged with the object to reviewing the present position in the light of experience gained, and of discussing the future of the movement.

THE LOAN LIBRARY.—This department of the Society's work has been organised and systematised, a definite sum set aside for the purchase of books and members invited to co-operate by making gifts of books or donations to the Library Fund.

BUILDING TRADES PARLIAMENT.—The Society has given notice to reduce its representation from four members to one as from June, 1922, and will then further consider the position.

BRITISH ENGINEERING STANDARD ASSOCIATION.—Pending the appointment of a permanent delegate the President, Mr. E. J. Sadgrove, is representing the Society on the Sectional Committee on sand lime bricks charged with the duty of preparing a British standard specification for this material.

NEW BUILDING CODE.—The Council have accepted an invitation from the R.I.B.A. Council to nominate two representatives to serve as co-opted members on a joint committee to consider the question of the establishment of a new building code of a kind which will give local authorities discretionary powers, provide for a right of appeal from their decisions, and encourage improvements in present methods and materials. Mr. Thos. Wallis and Major Skipper have been nominated by the Council to represent the Society.

The President of the A.A., Ireland.

By the courtesy of the "Irish Builder" we reproduce a portrait of Mr. J. J. Robinson, M.S.A., of Dublin, who was recently elected President of the Architectural Association of Ireland, together with a brief sketch of his professional career.

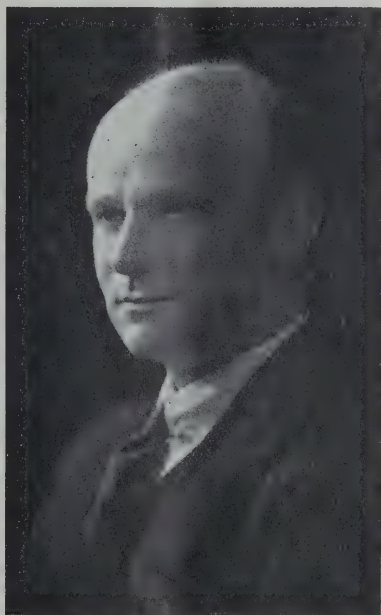
The son of an architect, the late Mr. J. L. Robinson, he was originally intended for the Church, but after due trial decided that his vocation lay in architecture, and he became a pupil of Mr. G. L. O'Connor, and after extending his experience in the London office of Mr. Leonard Stokes, F.P.R.I.B.A., he commenced practice in Dublin at the early age of 25, in collaboration with Mr. Keefe, and now extended into the firm of Donnelly, Moore, Keefe & Robinson, with whom Mr. W. T. Keatinge is also associated; "Architecture unlimited," as it is playfully designated by intimate friends.

The firm has carried out a great deal of reconstruction work in what is known as the destroyed area, and is responsible for the design, amongst other buildings, of American Chambers, and premises for the Saxone Shoe Company, and for Messrs. Dunn. In one instance Mr. Robinson collaborated with Mr. Hicks and Mr. Cullen, architects for adjoining owners, with the object of securing that one dignified and homogeneous structure might be erected, worthy of a situation in Sackville Street. This is a happy instance of the spirit of camaraderie existing amongst Dublin architects, and of the extinction of the ego for the uplift of Art. Other examples of the firm's work in this region of a past struggle are to be found in Henry Street at Messrs. Hayes, Conyngham & Robinson's premises, and those of Messrs. Hampton, Leedom & Co. Mr. Robinson also designed offices for the "Freeman's Journal," and Messrs. Donnelly in Westmoreland Street. The "Independent" offices, now in course of erection in Abbey Street, which cover nearly 17,000 square feet, were designed by Mr. Robinson and his partners, and, when completed, will contain the largest printing machine halls and the most modern printing plant in Great Britain and Ireland. The Hennibique system of reinforced concrete is being employed throughout, the frontage of 80 feet to the main thoroughfare being faced with red brick and Portland stone.

Mr. Robinson is a past hon. secretary of the Association of which he is now the President, and his activities in the cause of architectural education have resulted in his being appointed a member of the Board of Architectural Education of the R.I.A., Ireland.

He has devoted much thought to the housing problem as it exists in Ireland, and has applied the knowledge acquired by personal investigation from the conditions in Great Britain and elsewhere to such effect that his firm obtained first place in the competition promoted by the Irish L.G.B., who afterwards published the designs for the information of local authorities, who will not be inclined to question the adjudicators' decision. The competition for the housing of the working classes in Cobh was also won by the firm, and, at the moment, housing schemes approved for Dun Laoghaire, Galway and Naas, are reposing in the plan presses, awaiting the raising of the financial sluices, which, according to a statement of the Provisional Government, may shortly be anticipated.

Mr. J. J. Robinson was elected a member of The Society of Architects in 1916, and has taken an active interest in its work, and is one of the founders of the Irish Branch of the Society, the launching of which has been deferred until a more favourable opportunity presents itself.



MR. J. J. ROBINSON, M.S.A.,
*President of the Architectural Association
of Ireland.*

Higher Buildings for London.

MR. HARVEY CORBETT'S VIEWS.

It is interesting to note that the "American Architect" for January 18 devotes a two-page editorial to this subject. After briefly reviewing the opinion current in this country upon the question, and referring to the opinion expressed by the Secretary of the Society of Architects, they publish an interview with Mr. Harvey W. Corbett, F.S.ARC., from which we reproduce the most important passages. Mr. Corbett, a Fellow of our Society, is a partner in the firm of Messrs. Helmle & Corbett, the architects of the Bush Building on the Aldwych site, which has been the subject of much adverse criticism—especially from admirers of St. Clement Dane's. Coming from such a quarter, an opinion along the lines of the following extracts is a matter of no little interest.

"There are only three reasons why any City wants higher buildings," says Mr. Corbett. "First, property owners with particularly favoured terrains, desire a greater income on their land that the existing laws enable them to secure. Second, more space needed for business than can be provided under the present building restrictions, and, third, greater architectural variety in the skyline.

"The first is the most important reason, and, up to the present time, the only one that has resulted in high buildings in any City.

"A general and erroneous impression is that New York has high buildings because it is located on a narrow Island, and, with no room to expand laterally, was compelled to push up vertically. The observer has to walk only a few blocks East or West from Broadway or Fifth Avenue, on any part of their entire length, to become convinced that there was no lack of any room for lateral expansion.

"A similar scrutiny of London with its three and four story buildings, even in the busiest business centres, will result in the conviction that existing laws will permit the erection of nine story buildings where the present four story structures now stand. Here is the answer to the question: 'Why does London want higher buildings? . . .'

"Looking at the problem from another angle, we must take into consideration the fact that London is built on clay. High buildings, as we in this country know them, the Woolworth, the Metropolitan Tower, the Bush Building, would be structurally impossible in London. A height of 150 feet could be realised, but this would not produce a brilliant, scintillating skyline such as we have here, but would only result in creating darkened streets, increasing congestion in already overcrowded thoroughfares, and would make London, now unique among the Cities of the world for its impression of openness and air, its flowers and green spots at every turn, and its quaint, old-fashioned atmosphere, as commonplace and commercial as any of our own American Cities. I am confident," says Mr. Corbett, "that no architect would want to see such a change, and so far as I am aware, nothing has occurred to make such a change possible. Certain variations from the London Building Act are now possible for the creation of good architectural effect. Towers, domes, gables may extend a moderate height beyond the height fixed by law, but London can be just as practical a City, just as commercial a City and certainly a healthier, brighter and more distinctive City with her present Building Act in force as it is."

Correspondence.

HIGHER BUILDINGS FOR LONDON.

TO THE EDITOR, THE JOURNAL OF THE SOCIETY OF ARCHITECTS.

SIR,—Re Report in this month's Journal, I submitted plans to the L.C.C. for a new Store Building on a site in High Street, Kensington, on behalf of my clients, Messrs. John Barker & Co., Ltd.

The cube of the building is close on 3,000,000 feet and the height 80 feet to the eaves, and two floors in the roof. The largest floor area is practically 23,500 feet super.

It will interest the Society to know that the L.C.C. have in principle approved the plans subject to the omission of the two floors in the roof, and to a height of 80 feet to the under side of the ceiling of the topmost storey.

There are other conditions relating to the "Means of Escape" and "Fire Appliances" and constructional details which can be met without detriment to the cube of the building.

As the attitude of the L.C.C. is a step forward in the direction of meeting business requirements of large stores, I feel the Members of the Society will be interested in the progress of events appertaining to these large cube buildings.

I would specially like to mention that I view the present concession obtained from the L.C.C. as a step towards tall buildings of a height of 120 feet, and I am sure the Council must realise that any expense which they may be put to in connection with the remodelling of fire appliances, etc., must to a great extent be well met by the increased revenue obtainable from these larger business premises.

The question of "Fire Fighting" can rise to the occasion, and if, as I understand, it will mean a very big expenditure for the remodelling of fire appliances if we are to have taller buildings, then the sooner the policy of the 120 feet excess cube building is accepted, and the gradual remodelling of appliances takes place, the better it will be for large commercial undertakings.

With such restricted sites, and the urgent need for increased turnover in connection with trade, large floor areas become more essential as prices become reduced, otherwise there is no room to do the trade which is required to be done to make big commercial undertakings really successful from a financial point of view.

H. L. CABUCHE.

7, King Street,
Kensington, London, W.8.
March 4th, 1922.

Mr. A. A. Hudson, K.C., of 5, Paper Buildings, Temple, E.C., and 44, Mount Street, W., desires it to be known that he has not recently or at any time been a candidate for the London County Council, and that he is the only K.C. of that surname who has been called within the Bar in England. The association of his surname with the candidature for the L.C.C. has given rise to rumours of his retirement from practice thereby causing him considerable injury, and he wishes to dispel this illusion amongst the members of The Society of Architects, of which he is an honorary member.

The Society of Architects Masonic Lodge and R.A. Chapter.

At a regular meeting of the Lodge, held at the Holborn Restaurant on January 11th, 1922, the chair was taken by Mr. W. Hoe, in the absence through illness of the Master, the Rev. J. A. Smith-Bullock. Mr. George James Briggs, of London, was elected and initiated, several officers were invested, and other business transacted.

A Convocation of the Chapter was held at the Holborn Restaurant on February 8, 1922, when the chair was occupied by Mr. P. H. Hopkins and afterwards by Mr. Ellman Smith, in the absence through illness of Major E. C. P. Monson.

Mr. Hugh Watkins, of London, was elected as a joining member, and Mr. Henry Paul was elected and admitted to membership. The ballot for officers resulted in the election of Mr. F. J. Eedle as First Principal, and other officers in rotation.

Mr. Eedle was absent through illness, which unfortunately for the Chapter, resulted in his death on February 20. Many members of the Society's and other Masonic Lodges attended the funeral at Nunhead on February 24, and also the Memorial Service at St. Botolph's Church, Bishopsgate, on March 2, which was conducted by the Rev. J. A. Smith Bullock.

At the regular Lodge meeting on March 8th tribute was paid to the many works of the late Director of Ceremonies who was deservedly held in the highest esteem by all who knew him.

The next Regular Lodge Meeting is called for May 10th, 1922, and an invitation is cordially extended to any visiting members from other Lodges.

Competition Notes.

CAIRO HOSPITAL.

The following six competitors have been selected in the Preliminary Competition:—

John Reginald Truelove, A.R.I.B.A., St. Omer.

Messrs. Cackett & Burns Dick, F.F.R.I.B.A. Newcastle-upon-Tyne.

Messrs. W. & T. R. Milburn, F.F.R.I.B.A. Sunderland.

Messieurs Pierre & Louis Guidetti, Paris.

Messrs. Lanchester, Rickards & Lucas, F.F.R.I.B.A., and T. A. Lodge, A.R.I.B.A., London.

Messrs. Nicholas & Dixon Spain, F.F.R.I.B.A., London.

WOLVERHAMPTON WAR MEMORIAL.

The following awards have been made by the Assessor (Mr. John W. Simpson, F.P.R.I.B.A.):

First Premium of 150 guineas to Mr. C. T. Armstrong, A.R.I.B.A., Bexhill.

Second Premium of 100 guineas to Messrs. Ebbs & Warren, A.A.R.I.B.A., Chelsea.

Third Premium of 50 guineas to Mr. Wilfrid Bond, F.R.I.B.A., Grantham.

"Honourable Mention": Major Hugh C. Corlette, London; Messrs. T. Ridge & R. E. Haynes, M.M.S.A. (Shayler & Ridge), Oswestry.

Ordinary Meeting.

An Ordinary Meeting of The Society of Architects will be held at 28, Bedford Square, on Thursday, April 20th, 1922, at 6 p.m., for the transaction of formal business.

Victory Scholarship Fund.

It is hoped that members who have not yet subscribed will each contribute not less than five shillings per head before the end of April, so that the Fund may benefit by offers of contributions made on this condition.—(See *Journal*, February, page 81 ante.)

Year Book, 1922.

A copy of the Year Book containing the Register of Members and the Rules and Regulations of the Society has been posted to every member. Any member who has not received a copy is requested to communicate with the Secretary at 28, Bedford Square, W.C. 1.

Obituary.

STALLEBRASS, JOHN GARNER, Member, December, 1921.

WISE, ERNEST, Member, January 2nd, 1922.

LISH, JOHN JAMES, Member, Past President, January 17th, 1922.

BINKS, H. PERCIVAL, Member, January 18th, 1922.

EEDLE, FREDERICK JAMES, Member, February 20, 1922.

The Society of Architects First Half-Yearly Design Competition (1922).

Nineteen, or about fifty per cent., of the provisional entrants submitted designs in the preliminary test, which closed on Monday, March 20th 1922, the subject being "The Entrance Gates for the Grounds of a Country House." The drawings were numbered as received, and the Jury of Assessors, Messrs. Percy B. Tubbs, L. Sylvester Sullivan, H. M. Robertson, and Thomas Wallis, after long and careful examination of the designs, selected the authors of the drawings marked 3, 4, 5, 6, 9, 10, 11, 13, 16, and 18 to compete in Part II of the Competition. These were afterwards identified as follows:—

LICENTIATES:—HAROLD SCOTT DALBY, of Chester (13), OSWALD HOWELL GREEN, of Truro (16), ROLAND HULBERT SHREWSBURY, of Eccles (3).
STUDENTS:—HAROLD ANDERSON, of Canterbury (11), STUART BEDFORD, of Hove (5), ALAN JOSEPH BIDDULPH, of Birmingham (6), COLIN ARTHUR BROWNE, of Birkenhead (10), LEONARD KEITH DYER, of Portsmouth (4), EDMUND KENNETH RAINFORD, of Hoylelake (9), CECIL GEORGE VICKERMAN, of Huddersfield (18).

The final result of the Competition, which is of the value of £40, will be published in the JOURNAL in due course.

The Society of Architects.

Sessional Arrangements, 1922.

Subject to additions and revisions of which notice will be given in the Journal.

Apl. 1	Local Hon. Secretaries' reports due.	July 1	Local Hon. Secretaries' reports due.
" 6	Practice Committee 3.30 p.m. Finance Committee 4.30 p.m. General Purposes 4.45 p.m.	" 15	Victory Scholarship Competition, Part II.
" 11	Building Exhibition, Olympia, opens.	" 31	All borrowed books to be returned to the library for revision of catalogue.
" 14—18	Easter Vacation.	Aug. 1	Local Hon. Secretaries' reports due.
" 20	Council 5 p.m.—Ordinary Meeting 6 p.m.—Council Dinner to the President 7 p.m., at the Café Royal.	" 7	Last day for delivering Preliminary sketch designs in Part I of the second half-yearly Design Competition.
" 21	Reception at Pillar Hall, Olympia, 3 p.m. Dinner 7 p.m.	Sept. 1	Local Hon. Secretaries' reports due. Entries close for October Membership Examination. Issue of Library books resumed.
" 27	Building Exhibition closes.	" 7	Council Meeting 3 p.m.
May 1	Last day for submitting Travelling Studentship Designs.	" 22	Membership Examination opens.
" 3	Membership Examination closes.	" 29	Michaelmas Day.
" 4	Practice Committee 3.30 p.m.	" 30	Last day for delivering Nominations for Council, and Architectural Scholarship Drawings.
" 10	Masonic Lodge 4.30 p.m., Holborn Restaurant.	Oct. 1	Local Hon. Secretaries' annual reports due.
" 11	Council 5 p.m.—Ordinary Meeting.*	" 5	Practice Committee 3.30 p.m.
" 17	Entries close for "Victory Scholarship" Competition.	" 9	Last date for delivering Ballot Papers for Council Election, and for depositing Final designs in Part II of the second half-yearly Design Competition.
June 1	Local Hon. Secretaries' reports due.	" 11	R. A. Chapter, 5 p.m., Holborn Restaurant.
" 3	Victory Scholarship Competition Part I.	" 12	Council 5 p.m.—Special General Meeting 8 p.m. Election of Council for 1922–23.
" 5	Whit Sunday.	" 31	End of Session.
" 6	Bank Holiday.	Nov. 3	Membership Examination closes
" 8	Practice Committee 3.30 p.m.		
" 15	Council 5 p.m.—Ordinary Meeting*		
" 24	Midsummer Day.		

* The time and other details of the Ordinary Meetings will be announced in the Journal.

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A Plea for the Modern Outlook.

By H. BARTLE COX, A.R.I.B.A., Membre corr., S.A.D.G.

THE ARCHITECT'S OPPORTUNITY.

While architects in England are discussing Unification and Registration the people are crying for half-a-million homes! While architects in France are discussing Régional Architecture, the *Chambre* is asking for the construction of 500,000 cheap cottages!

Never before in the world's history was there such an artistic opportunity and never before was there such an urgent necessity for the profession in both countries to come to some definite decision as to its real position! Can architects afford to talk about local design when the only question staring us in the face is that of Economy? Do we prefer to talk archæology while the Engineer produces beauty and the Builder makes money?

In France, the position of architecture and public criticism is much the same as in England; with the difference that, over here, they have a better established educational system, and that the publication of the annual report on the *Beaux-Arts* Budget gives definite shape to the will of the times.

NATIONAL INTEREST.

Better than private opinions, budgets show the character of a race. In England, it is a notorious fact, the people with all their pride do not esteem their own artists. To say we are not an artistic race almost seems to some, to imply a virtue. This prejudice is so strongly felt to be the case that English singers, to ensure their success often take Italian names. Our civic monuments are a hopeless medley of cosmopolitan

ideas, as the streets of London testify. The richer John Bull becomes the more his interior resembles a museum; and yet, he says, "English art should be English."—It is! Art is regarded by him as a pleasant pastime for the rich, and a pernicious luxury for the poor. However, when the question of naval supremacy is at stake, the matter is taken seriously; and, what is more, many authorities on art maintain, much to the surprise of our bourgeois mentality, that the aesthetics of a destroyer or of a submarine are vastly superior to those of an average modern civic monument. Be that as it may, it is obvious that what a nation takes seriously it does well.

I therefore suggest to those who would be proud to see the prestige of our art equal to our political prominence, that artists be not treated as troublesome people to be occasionally humoured, but, indeed, as representatives of the national inheritance. Racial expression would be stimulated if, besides seeking inspiration from foreign architectural details, the public were brought to appreciate foreign, and particularly French, *Art Organisation*.

If the word *Organisation* is disliked in connection with art, then let the thing be given another name. But some form of encouragement is imperative. The Report on the Beaux-Arts budget best shows each year how keenly the French regard the importance of art to the State, and how the government's attitude towards art moves with the times. The discussions and votes of the *Chambre* demonstrate, better than fiction, the real nature of the people. The way a man regulates his finance is convincing evidence of his predilections. The same can be said of a country. The national budget shows the extent to which a thing is, or is not, encouraged; its items give material proof of those considerations to which the race agrees, or does not agree, to attach importance.

Grants for education and statutory powers for professions are on very different footings. In France—the writer can state this with authority—very few architects have any standing, even in the provinces, who have not had some training at the *Ecole des Beaux Arts*. Registration never existed here. Architecture in practice being for the most part a business, the question of defining the responsibilities of those people who assume the title of Architect is a question outside and beyond that of the *art* of Architecture. The State is concerned with maintaining the prestige of the high educational opportunities offered by the organisation of the *Ecole des Beaux Arts*. The public is thus protected in so far as it cares, itself, to recognise Architecture.

Since the aristocratic foundation, in the time of Louis XIV., of the Beaux-Arts Ministry, the people's representatives, whether autocratic or democratic, have thought fit to subsidise art education, and in so doing have a right to air their views. The object of this study on the last *Beaux-Arts* Budget Report is to consider whether the latest official opinion will prove the most permanent. Fortunately for the art of France what one government thinks fit to encourage another can discountenance, but, except in times of severe political pressure, no drastic alteration is made until both sides have been consulted. Thus the ideal of the times, whether æsthetic, industrial, or both, gets voiced and acquires vigorous national expression.

In December of 1920 *The Builder* published three short articles dealing with reforms recommended in the report of the budget for that year on questions of Architecture and decorative art. It was then noticed that the Rome Theory was attacked, the *Ecole* methods were criticised and a form of Decentralisation was aimed at. This year, with less anathematising, the same democratic theme is belaboured with certain proposals which it will be instructive to note.

Decentralisation of art-organisation, to some, sounds like a democratic principle capable of producing variety of expression and originality, whereas Standardisation of the elements of design, to them, savours of commercialism and seems inartistic in

conception. To show what is recommended, for the moment, by non-technical officials in France as against what is really taking place cannot fail, now that the vexed question of Unification and Registration is to the fore, to be of capital interest to architects in England.

It is logically clear that with the growing complexity of modern life and the interdependence of Art, Science, and Industry, that National interest is best fostered by *co-operative propaganda of the professions*. In this connection it is important for architects to note that what they so much desire in England is (possibly) being brought about in France in a very different way. A bill is now before the *Chambre*, not for the Registration of Architects, but for the SUPPRESSION OF THE USURPATION OF PROFESSIONAL TITLES of which that of Architect is but one!

This bill, still far from an Act of Parliament, if ever it becomes law may be helpful in defining the responsibilities of that most varied tribe of business men who are pleased to style themselves architects; but I am informed that it is impossible to exact a diploma or in any way to view Registration as touching upon the consideration of Taste. This latter consideration, dear to our Institute, is, or should be, the main concern of those bodies formed for that purpose. These bodies, when the public want definition, are asked for advice and so the dignity of the profession is maintained. If the aesthetics of building tend to pass over into the hands of engineers, it will of course, in the long run, with a change of name, come to the same thing. The bill will probably include a suggestion to the effect that for all government work only architects with the government diploma shall be employed. In this way the state, at least, will always be sure of only employing men who have had some show of training. Thus I infer, that the chief concern of architects (in the higher sense of the word) is to consider that training. For this I claim that parochial effort is less efficacious than National interest, as French official documents well show.

Monsieur Pierre Rameil, in whose name the Report is made for the *Ministère de l'Instruction Publique et des Beaux Arts* informs me that his position is a particularly ungrateful one (especially as a *Rapporteur du Budget des Beaux Arts*), but in spite of post-war difficulties he points out that the nation has voted for Fine Art purposes (schools of art, theatres, museums, historic monuments, national palaces, etc.) 48,434,955 frs. as against 38 million odd for the previous year. He estimates that the art of the country is now only nationally subsidised to the extent of about 1/550th part of the public expenses. Even if of a small proportion it nevertheless shows a certain public concession towards the higher motives of life.

THE ROME IDEA.

Modern civilisation seems to have developed out of Roman theories. Their true significance, however, are often lost sight of even by its advocates. The foundation of the Academy at Rome goes back to 1663 and the first *Grand Prix* in Architecture dates from 1720. The Academy, suppressed by the *Convention* and re-established under the *Directoire*, passed through many vicissitudes until the foundation of the *Institut de France* in 1795, from which date it takes a definite lease of life. Between 1801-7 the Villa Médicis was acquired and has remained for over a century the official seat of the French Academy at Rome. The artistic influence, direct and indirect, of this highly organised institution has been felt, for better or for worse, over the whole of the civilised world.

The chapter of the report dealing with the *Académie de France à Rome* shows that last year's credit amounts to 597,760 frs., being over 71,000 francs more than for the previous year. This small sum for such a large concern only represents the govern-

ment grant for the year. It is independent of donations and private legacies. This year, another urgent appeal is made that the beneficiaries of the Grand Prix should be free to choose as places of residence, Rome, London, Madrid, Florence, etc. Mention is made of the Villa Velasquez at Madrid, the Villa Abd-el-Tif at Algiers, a Villa Reynolds at London.* Over a year ago M. René Héry, *sénateur*, recommended the foundation of an Académie de France at Constantinople. Others suggest that the Prix de Rome should be changed into a travelling scholarship. Whatever the difficulties, and final outcome, these persistent appeals all show how the Rome theory is losing favour.

These remarks of course refer to painters and sculptors as well as to architects, and the report after all, is only the echo of a certain party which, if not technically acquainted with its own grievance, is nevertheless justified in crying out for reform. Critics all admit that there has been too great a tendency to ape the pompousness of Rome to the detriment of its more logical teaching. The lessons from Rome are ever modern if taken in the spirit and not in the letter. After Paris, as a secondary residential centre for inspiration, no one city in the world is better calculated to stimulate an appreciation for rationalism in architecture than the Eternal City. The report states :—

“To seek the form, the colour of our time, to be an artist of to-day, such should be the preoccupation of the beneficiaries of our *Grand Prix*.” We know of course what is meant; but another *Rapporteur* with more conservative opinions (or information) than M. Rameil could say the same, however; and an item of more concrete importance to experts on Architectural education is to be found in the “*Journal Officiel*” for January, 31st, 1921, in which we see a decree modifying that of November, 13th, 1871, which regulated the conditions of admission and residence at the Rome Academy. By this decree the age limit for the *Grand Prix* is reduced from 30 to 27.

Article 2 runs as follows:—“As a transitory measure, and by reason of the consequences of the war, this age limit remains at 34 for all competitions of 1921 and 1922, in all sections. It is fixed at 30 in 1923, at 29 in 1924, at 28 in 1925, at 27 in 1926 and all the following years, for the competitions in painting, sculpture, architecture, and musical composition. In Article 3 it says :—“Architects must, while *Pensionnaires* make a journey to the East.”

The length of time as *pensionnaire* still officially remains at 4 years, but even this for special cases, can be reduced. These reforms show a tendency to minimise the theoretical period, and no longer regard Rome as the sole source of inspiration for modern requirements.

The report gives the living touch of the country's healthy adjustment to practical considerations, and the dry figures of the Budget are proof of the nation's pride in its patrimony.

ARCHITECTURAL TRAINING.

Now that the pupilage system in England has practically seen its last days as a sole source of technical education, the difference between our “School” or college training and that of the French method should be understood by professors and made known generally to the public. In France there is but one school for the whole country, and that school is more in the nature of a national examining body than a teaching institution. The student is free to study where he likes. He invariably

* We have searched in vain for such a villa. The author informs us that its foundation has merely been proposed.—Ed.

studies different subjects in different places, and by working at intervals in architects' offices keeps in touch with the practical side of life. Our university architectural course is a much more drastic revolution from the pupilage system than the French method. In France the State offers the pupil a gratuitous opportunity of competing with other pupils, and leaves him free, not only to choose his own professors, but to come and go at the *Ecole* as the exigencies of his office demand. The State supplying money, public opinion is brought to bear upon the training, and so by virtue of healthy criticism, the life of the profession is kept ever fresh.

The chapter of the report dealing with the *Ecole Nationale Supérieure des Beaux Arts* is of moment to Architects in England who are in any way responsible for the future prestige of the profession. A federation of our teaching bodies might do more to produce public recognition than the mere Unification of a band of business men.

In France the public know that a man *Diplômé* by the Government, if not a genius, has at least a right to call himself an architect. The *Société des Architectes diplômés par le Gouvernement* does not include all the men that have the government diploma, and during the war the society lost 80 of its confrères; but it still has a membership of 1,275. It is not the oldest, but is now the biggest and most influential of architectural societies in France. It was recognised *d'utilité publique* by a *decret* of March 30th, 1915, which gives it legal standing.

Though France has produced most of the greatest painters and sculptors of the last century it is questionable whether the *Ecole* can count the majority among her offspring (especially within the last half century), but it is entirely different with the architects. No school in the world has ever devised such an efficient training for the production of so large a percentage of men qualified to tackle an architectural problem. The report states that the *Ecole* to-day counts as students 245 painters, 67 sculptors, and 1,282 architects; besides a thousand students of the galleries and ateliers. These figures are not mere paper statistics, but represent the number of serious students who have had to pass a stiff competitive entrance examination.

The report says: "For the architects, we ask for an instruction more professional than theoretical, and more utilitarian competitions in which it should be proposed to build fewer palaces and more bright and comfortable houses, as well as rational workmen's cottages."

This may be calculated to win the favour of electors and helps in a way to bring the professor of theory at the *Ecole*, who sets the *programmes* to adapt himself to the democratic requirements of the epoch. To anyone who knows the *Ecole* the report's recommendation in this particular is pure waste of time, since no more varied and practical set of subjects could be imagined than those set for the student within the last 10 years or so. It is true the housing problem is the great question of the day, but architectural education should go beyond the design of workmen's cottages.

Further on in the report, M. Rameil quotes from Monsieur Frantz Jourdain (President of the *Société du Salon d'Automne*) whose utterance shows the value of criticism. The government report can be helpful when it quotes from authorities. M. Jourdain says: "The plans of an edifice or of a simple cottage are transformed according to its requirements Supposing for a moment that the childish snobism of a multi-millionaire demanded the reconstruction, *for living in*, of Coucy or of Chaumont, we can be certain that the exterior alone would copy (and with what awkwardness!) the stones of former years, but that the plan would be bent to the exigencies of modern comfort." This call for a frankly practical modern outlook is refreshing. It is the very spirit that actuated the architects of the great epochs. If our clients will not let us be modern we shall be their slaves instead of their advisers.

The French Government says it is happy to state that the *Ecole* continues to be animated by a praiseworthy spirit of reform. Credits granted under three headings for this item amount to 1,059,950 frs.

THE APPLIED ARTS.

When art goes in one direction and commerce in another, disaster to both is a natural consequence. To marry Beauty with Mass Production, as our Parliamentary Secretary to the Board of Education, Mr. Lewis, puts it, is a necessity that applies as much to the *housing problem* as to industrial art.

For many years one of the chief sources of wealth to the French nation has been its applied arts (wood and stone sculpture, ironwork, tapestries, enamels, weaving, glass and china ware, laces, embroidery, silks, etc.), but now the government feels it advisable not to disguise the fact that the country is being rapidly outdone by German and Austrian organisations.

After lamenting the wretched state of the premises of the *Ecole des Arts Décoratifs*, still in the same building (rue de l'Ecole de Médecine) where it was installed in 1775 by Louis XVI, the report sorrowfully confesses that in 1912 there were 1,039 students, which number has now dwindled down to only 300, while the Decorative Art School of Zurich has 6,000.

Before the war the German turnover in *objets d'art* was three times that of France, and the German importation into England annually increased by 100 million francs. From this it would seem that State Aid for art industries creates a national interest, and becomes in the end a remunerative affair for the budget.

It is worth remembering that the reign of the *Roi Soleil* is chiefly known to artists through the indefatigable industry and enlightenment of his minister Colbert. Now the Report informs us that "after the Franco-German war (1870) Bismark took over the Ministry of Commerce, thus tracing the route Germany was to take thereafter. To-day Germany gives one of the Emperor's palaces to her museum of decorative art, thus showing the national importance which she accords to applied industrial art."

In *The Builder* for Dec. 31st, 1920, the organisation known as the *Werkbund* (Labour Union) was explained, it now remains to add that "the smallest village in Germany possesses a *Kunstgewerbe-Seminar* (School of decorative art) where the technique of all forms of art are taught." Surely a form of centralised decentralisation? "The young German there learns to make indifferently oriental rugs, Sèvres porcelain, Lyons silks, etc., and the products resulting from his industry of assimilation will again flood the markets of the world."

The Report in its dilemma strenuously calls for more encouragement of industrial art, particularly in the provinces; and that is why so much stress was, last year, awkwardly laid upon the principle of Decentralisation. This latter idea, correct in one sense, must nevertheless be properly understood. The word is unfortunate since the tendency of all things all over the world has become to Centralise. Whence the strength of German commerce!

CENTRALISATION.

The English have recently learnt that liberty (?) can only be bought at the price of conscription! Yet, in educational matters, we still hang on the racial but non-national superstition of individualism. Our hearts are stricken with terror when obliged to recognise the inferiority of allied factions as against the dreaded power of Centralisation. "Granted! such may be the lesson of the war," say some, "but Art and Religion are different and should be free."—Perhaps! yet are they; and can they

be? Is not man a social animal, and do not architects copy and develop along traditional lines? Originality in design is too great a miracle to be believed in nowadays by professional men with any learning.

Even in the middle ages religion was centralised in Rome and the artists of that period covered the whole of northern Europe with a fairly uniform type of architecture, which was, for all that, none the less a most glorious human achievement. Since the introduction of railways and other forms of rapid communication, the post, cheap printing and especially of photography, the whole artistic outlook is revolutionised.

The areas of centralisation have so increased that the very word *locality* is losing all sense of meaning. Not only Europe, but the whole of the civilised world has now adopted (with but insignificant variations of detail) one universal character—in architecture a style until recently based on the orders, but with a modern tendency towards an abolition of these tyrannical and much-abused elements.

One country can now learn from another more rapidly than one province could from its neighbour a century ago. Our professional papers disseminate every week exhilarating suggestions from foreign sources. France is nearer to London than Scotland; and what could be easier than to go up to London from the provinces to get a good idea of American architecture? Is it advisable or even possible to resist this universality of aim?

How much longer will the public tolerate our pretensions if we talk stage-scenery, instead of co-operating with industry with a view to supplying at the cheapest possible rate the hundreds of thousands of houses now needed by the nation?

Monsieur Pierre Rameil in his report naively says: "The national school of Fine Arts will no longer impose on our regional schools of architecture uniform competitions, good alike for Lille, Rouen, Toulouse, or Marseilles. Our old monuments, the very personality of our provinces, the materials of the country, are elements not to be neglected in the orientation of the architects of to-morrow." This may seem very plausible to the superficial reader because it contains a certain limited poetical suggestion, but is really more sentimental than logical. The old monuments are not modern, and what, it may be asked, is now the personality of the provinces? M. Rameil is himself from Perpignan; but he has discarded the twang of his Région. Why? Puvis de Chavannes, a native of Lyons, has decorated buildings at Marseilles in the same magnificent manner in which others at Amiens are adorned. As to materials, local stuff was naturally more used before the cheapening of transit, and gave to buildings a certain local personality, but in these days it is often cheaper and more effective to use foreign materials. This undeniable fact is outside the influence of the professors who set programmes at the Ecole des Beaux Arts! Besides a student, wherever he lives, wants to be trained to compete in open competitions.

M. Rameil's observation does not seem consistent with his continual call for a practical adaptation to modern requirements. Is it not an established fact that the metropolis attracts the most ambitious students? The *Ecole*, by setting the same *Projet* for the provinces as for Paris, is only doing for school work what actually takes place in practice; besides, it helps (in a measure) to keep students in the provinces. It is a form of decentralisation or ramification; for they can compete for the same subject as their Paris colleagues and are represented on the Jury in Paris by the *Patrons* of their respective schools. Without this measure all provincial students who could afford it would go to the capital, for, in an open competition, a student with a Paris training is much more likely to win than a provincial, whose opportunities for education have been confined to those offered in his own locality. Besides, he is not blind to the fact that Regional Architecture is a thing of the past.

We might as well take the bull by the horns and admit that the same programme would now do for England, France, and America; for after all it is only theoretical work, and in actual practice the training acquired will be adapted to the locality. *Vide* modern American architecture!

Centralisation, whether liked or lamented, is irresistible. It is the principle of the combine that kills the small man, and the government that protects him. Who can define, architecturally speaking, where a modern province begins and where it ends? How is it that most of the important buildings of the provinces in England are designed by London architects, and most of the important buildings of the length and breadth of France are designed in Paris? And where, and by whom, are the principal buildings of the Colonies designed?

This tendency towards administrative centralisation leading to standardisation in design is so obvious that even the sticklers for regional architecture reluctantly admit it, saying: "Yes, I know; but don't let's hurry it." This, of course, means retarding it: and that is precisely what the author considers as the greatest sin of the profession at the present crisis, when a house must be built by a foreigner if a local man cannot do it as cheaply, or when series of houses in various parts of the country must needs be designed and erected by one large capitalised syndicate if separate local organisations are unable to turn them out cheaper.

STANDARDISATION.

In *Notre Dame de Paris*, Victor Hugo has developed the theme that Architecture received its death-blow by the invention of printing. ("Ceci tuera cela, *le livre tuera l'édifice*.") This is only true for a romanticist, however; and regional architecture is everywhere giving way to a universal style. In æsthetics the engineer is replacing the architect. After all, what's in a name? All ritual has its allotted time, and is superseded even if regretted: *Ceci tuera Cela*; the Universal will kill the Particular.

In the old days Climate played some part in the determination of style; but now the dictates of the client are easy to comply with; besides, the difference in climate between Birmingham and Bordeaux is merely a matter for invalids. If a gothic cathedral in Calcutta is more out of place than an Italian palace in Pall Mall, it only shows what can be done in spite of climate! The civic mentality of Liverpool is not vastly different from that of London, and the modern requirements for a station in Brittany are much the same as those in Burgundy. The railways carry the materials best suited for the job; and economy coupled with efficiency will ever successfully compete with any assumed local prerogative.

In spite of the personal eccentricity of the age, the direction which Architecture will have to take is again becoming a serious problem. Unreasoned originality is worse than tame tradition; for art is evolved, not created. A sane uniformity is more invigorating than a heterogeneous mass of idiosyncrasies, for originality is, often enough nothing but bluff. The provinces have no modern personality: they draw their inspiration from the fountain-head, do their work as best they can, and for important affairs consult experts from the metropolis. Because this was not so marked some hundreds of years ago, why should we whine over the inevitable march of progress?

If the word *standardisation* is repugnant to some people, it is because they do not know what contributes to the things they admire. The quality of harmony is largely a matter of uniformity, and one of the principles of design is repetition. How much more dignified the Rue de Rivoli is than the Avenue de l'Opera; how much more reposeful is Gower Street than Southampton Row! The lay-out of Bath is more impressive than that of Bristol; and Paris is far finer than London. The more an ideal becomes standardised, the better its chance of perfection. It was only by such

means, spread over at least a century of the refining of the type, that a Greek temple or a Gothic cathedral was able to attain to those heights of æsthetic finish which we all so much admire. It is only through standardisation that we have been able to design the splendid lines of modern steamships or of motor-cars.

All the constructional elements of the Parthenon existed long before Phidias. His great mission was not to invent but to bring the standard of Greek temples to its climax. The programmes for mediæval buildings were also well set when the standard became established. The present age is a transitional period of great complexity in which the engineer alone is sure of his standard, provided he does not attempt ornamentation, popularly termed architectural treatment. This so-called architectural treatment, falsely termed *style*, is reducing architecture, properly speaking, to a third-rate art. Construction has progressed more rapidly than decoration: or, rather, this latter is becoming more and more less important. The programme for an aeroplane has its standard; but the programme for a modern palace is, by common consent, worse set than one for a factory. The æsthetics of pure construction are more important than its dressing; but long before the whole can be brought to perfection the modern standard must be found.

The petty-minded infatuation for ornament, the hysterical appreciation for local peculiarities (more novel to the visitor than to the resident), the pretentious ancestral worship of the half-learned archæologist, the sophism of most popular writers, the wide-spread insincerity of many so-called artists (poseurs), the bluff of modern art-dealers (made easy by dilettantism), the belief that art is a gift outside and beyond all useful and practical considerations, are some of the reasons why the meaning of the word Architecture has been so distorted, why the average person takes the trappings of a building to indicate its style, and why he dare not admit the beauty of engineering, while, at the bottom of his heart, he enjoys his motor car far more than his Queen Anne billiard room, and admires the nation's marine more than its museums. It behoves architects to take this into consideration if they want to improve the narrowness of their modern position. Victor Hugo was right after all, if only to a limited extent!

Science applied is art, and architecture is nothing if not positive and social, and capable of comprehension. People talk of style when they think of ornament. Hard as it is to say, the real style of the present epoch all over the world is *Construction hidden under Pretence*. This is due to a wrong interpretation of the Rome Idea. The financial uneasiness of the times is an undoubted God-send for the art of architecture. A pedantic use of the orders has been called architectural treatment. However, there is hope; for some of the plainer work in Germany, a few factories in America, the *Théâtre des Champs Elysés* at Paris, and Monsieur Tony Garnier's work at Lyons offer inspiration for a more æsthetic treatment, and one more adapted to the requirements of the times. Noble forerunners of the modern style: simple and economical!

To admit a constantly developing *universal* seems obnoxiously mechanical to the metaphysician, who delights in vainly seeking for the mysterious genius who shall, with some heavenly inspiration, suddenly revolutionise the mind. He talks of tradition and does his best to hide its meaning. All localities have, and always have had, the same fundamental tradition: viz., to perfect the *universal*.

The more a nation clamours for national expression, the more it will centralise (as shown in its armies and navies); the more it centralises the more it will standardise (as in languages and costumes): and the more it standardises the greater the opportunity for perfection (in its temples, railways, etc.). Older civilisations did the same, and later civilisations will call for other standards; and so on till the end of time. That is *tradition*.

The *housing problem* calls for an understanding of the æsthetics of houses in series, houses conforming to a type, houses without pretension. The co-operation of architecture and industry. The finding of the *standard*.

ORGANISATION.

Most architects will agree that it is better to do design than to talk about it. True—but it is better to realise a poor design than merely make the drawings for a good one. More than ever before in the history of the nation the country needs the organisation for the realisation of some efficient Housing Scheme. If ever there was a time when the Mother of the Arts needed to be respected instead of doubted, it is now! We are losing caste, for we cut each other's throats. There is a lack of Unity in spite of the cry for Unification; for whom are we to admit into the fold?

What are the functions of an architect? How far is a financier, a Party-wall expert, an estate agent entitled to this blessed epithet? Engineers design, builders construct, and architects supervise. Sometimes it is otherwise, but in the majority of cases—let us be frank—the architect is little more than a checker of accounts.

To those who can afford to regard Architecture as a calling, I say: There is need for some definition. I would like to ask them if in their opinion Registration before Education will save our honour.

In England we have what are called experts in Hospitals, experts in Theatres, experts in Schools, etc. etc.; but what does it mean from an architectural point of view? It simply means they are acquainted with the requirements, and as such might be excellent men to set programmes for architectural *projets*. Surely an architect worthy of the name is a man who can design irrespective of the programme. This has never been sufficiently understood in England because we have never had a School; but the adoption in England of French methods is preparing the road. The time is ripe to make this known; for architects need a *school* (and not schools) if they are to expect public recognition.

Individual effort, by itself, is all very flattering; but not being collective it leads nowhere. What would be the value of the government without centralised organisation? To rely upon the harmonious working of self-governing communities, on the plea that they were all composed of Englishmen with the same patriotic interests, would be to court obvious disaster. The same is also apparent (if a national style would flatter our artistic pride) in connection with architectural education, for a state cannot exist within a state.

English, French, German, and American methods differ in detail; but the principles of design are the same the world over. In general terms, it is usually considered that the English are the masters of domestic architecture, the French of civic monuments, the Germans of town planning, and that the Americans are sometimes good at all three. Distinction should be made between a national school and national characteristics. The latter may or may not be desirable; for England has barren as well as fertile soils. The desire to retain national characteristics sounds plausible enough, and is in certain cases the means of developing local colour; but the fact of a characteristic being national is no proof of its being artistic.

We may not like the methods of the Germans; but they have the reputation of being good organisers, and their town planning schemes are held up for our admiration. The French Budget report (which must naturally be drawn up on patriotic lines) states, in the face of glaring facts, the necessity of admitting the efficiency of German organisation. The question that presents itself, is: What is the best method of coping with German and Austrian competition in the European markets for applied arts?

I suggest that three courses are open to us:—

- (1) To adopt the logical artistic principles of our epoch;
- (2) To cater for the amateur, complain of the inartistic spirit of the age, and die; and
- (3) To run on purely business lines, catering for the fashion of the moment.

The first course probably won for the French their original fame when their work was the honest best of their day. They have since succumbed (as last year's report on the budget clearly stated) to the temptation of trading on that fame. This second course pays for a time, but saps the progressive life of the industries, until they have only just enough art left to make it difficult for them to become mere money-making concerns. Whichever course they adopt, they will be up against competition (both artistic and commercial); and in either case their success will now depend upon the degree of centralised organisation.

Of all the plastic arts architecture is the most comprehensive, the one requiring the most co-operation with craftsmen, engineers and industry generally. Encouragement on a national basis is certainly desirable; but the advisability of state aid is a question of its method of application. Much of the success of German industry is undoubtedly due to state aid; and the Universal renown of architectural training in France would have been impossible without the official support granted to the *Ecole Nationale Supérieure des Beaux Arts*.

German superiority in art industry is perhaps not due to any artistic superiority, but to a keener national sense of modern trade. They know that the artistic industry of France is based on past glories, and that they (or anyone) are just as capable of turning out new stuff on old models as the French themselves.

If art and industry are confounded, the German turnover must be a humiliating revelation for what was the most artistic race in the world. But times have changed, and art, like charity, seeks not its own. The remedy, however, lies not in decentralisation; for that is now politically and artistically impossible. Besides, it would assume that art industry is based on art, and would presuppose, rightly or wrongly, the artistic superiority of the Germans. Such a retrograde measure would amount, not to state aid, but to state interference. The artists of the provinces will not care to be told that they must confine their energies to the limited inspiration of their region. They have the means now of a wider field, and would be false to their art if they did not use them.

Competition in trade must be met on a trade basis, and competition in art on a basis of education. Both require encouragement, support and organisation (in other words the highest form of centralisation) considered separately and collectively.

Whether we want to be bothered with these considerations or not, it should be borne in mind that to belong to any society is to support or to oppose some particular measure!

FEDERATION.

In France, the main questions of organisation in connection with architecture have all been thrashed out long ago. The students have the best possible training, and the profession enjoys a standing such as no other country can boast of. It is now merely a question of reforms, modification and adjustment; but in England, from a modern point of view, the whole position is in its infancy. It is therefore in our interests to take the matter seriously if we really want public recognition.

I submit that the items of moment in the order of importance are as follows:—

- (1) *Education* (schools, pupilage;—centralisation decentralisation).
- (2) *Professional Practice* (co-operation with artists, engineers, industry;—federation, unification).
- (3) *Protection* (state aid;—registration).

Some (I know) would favour a reversal of the order; but I believe that a sound training would in part produce its own moral protection, and that Registration, taken by itself, would create material animosity.

Architecture in practice (very different from the theory of schools) is so complicated a matter that Unification seems illogical. *Federation*, as it is found in France, appears to me as the more dignified attitude (especially for the body with the greatest artistic prestige), and sufficient in itself to treat with Parliament for the whole body of the profession.

Public apathy to the profession is the natural outcome of our mission; for the architect's position is daily becoming more and more difficult of definition. What special qualities over his collaborators has he to warrant any special protection? I do not hesitate to say that less than 25 per cent. of the practising architects in England understand the application of the orders, and, even if they did, they would not therefore be better architects than a man with a thorough knowledge of mathematics.

The whole question revolves upon whether the public must regard a modern architect (whatever that may mean) as a necessary *master of the job* for every kind of building.

It is hardly patriotic to expect democratic England to attach much importance to the granting of statutory powers to architects for the sake of pleasing architects; but the nation might be willing, if judiciously approached, to officially encourage education on a much larger scale than heretofore. If it shows no interest in education, how is it to be hoodwinked into closing the profession?

Parliament, if asked to grant Registration, might demur on the following questions:—

1. What is an architect, what are his functions, and from what does he claim to be able to protect the public?
2. Do architects know more about building than engineers?
3. Is art, as understood by modern practising architects, an undisputed boon to society?

Registration might be a good thing for defining the etiquette of practitioners; but what body would represent the higher aspects of architecture (in the proper sense of the word) if we had to buy it at the price of Unification. Registration, if of any use to our calling, might be better brought about and the dignity of the Royal Institute better maintained by a *federation of the professions*. This would form even a larger organisation, and would certainly carry greater weight with Parliament.

If other professions are not protected, difficulties will surely arise; and if they do become protected the Institute (after Unification) might suffer the fate of the frog in the fable. Unless we are honest with ourselves, proprietors will ask Parliament if the arrangement and decoration of an edifice are more important than its construction. Well-informed amateurs will want to know on what grounds an estate should not be laid out by a specialist who does not care to become a member of a crowd of ignoramuses. The art critic will then be brought along to prove that modern engineering is æsthetically superior to the so-called architecture of modern architects.

THE ISSUE.

We are truly in a sorry plight. The greatest of all the plastic arts is now floundering about seeking the standard of the times. I therefore venture to predict that Registration is attacking the problem from the wrong end. *Encouragement for profici-*

ency rather than protection for practitioners would appeal more to an enlightened public. A federation of all the societies is necessary, to urge on Parliament the need for a large subsidy for architectural education, which will enable the poor student to compete with the rich, as he does at the *Ecole des Beaux Arts*.

A closer analysis of French organisation would do more for English architecture than a lame imitation of French art. Think of the advantage if the different schools were regarded as *ateliers*, and centralised with their professors in one body—say, for the sake of illustration, the Royal Academy. Parents and guardians would soon see whether the London University, the A.A., or the Provincial Schools were turning out the best students. It would of course fluctuate according to the professors; but something national would result, and the public would be impressed. So long as there is no National School there will be bickerings and differences of opinion, all calculated to hinder the attainment of the standard which it is our duty as architects to seek.

Satisfaction in past glories is a snare for the unwary, the more dangerous the more he is forced by circumstances to fall into line with a new order of thought. English domestic architecture developed from Dutch and Normandy prototypes may have produced the most comfortable and appropriate form of country house in the world; but we feel the narrowness of their charm: besides, civic and industrial work assumes a larger aspect. Dialects give way to the purity of the mother tongue, and the quaintness that is lost is more than compensated for by the precision that is gained. In architectural education the pupilage system will be replaced by the *ateliers* and a National School will unite the different Universities.

The *Ecole des Beaux-Arts* in matters of artistic education, if too dry and coldly academic for the inspiration of modern painters and sculptors, still sets, for our less emotional though more social art, the standard for the whole of the civilised world, not of architecture, but of *Architectural Training*.

Parochialism is prompted by party politics, but, unlike a trust or a State Monopoly, centralised architectural education fosters the keenest possible form of emulation.

No one will deny that architectural education in England has recently overcome its inertia, and that it has received within the last ten years, through the foresight of a few energetic patriots, a really tremendous impetus from France. And, in spite of self-interested opposition, it is now manifest that the new methods have come to stop. I therefore urge on the profession the necessity for completing the organisation by founding:—

1. A *Single Centralised National School*, with ramifications in the provinces;
2. A *System of Co-operation with Industry*, for the realisation of national problems; and
3. A *Federation of All Architectural Societies*, to present petitions to Authorities.

A *Rapporteur* of the *Budget des Beaux-Arts* has to report on all the arts, and, naturally, has to seek information from authorities who hold the views of the Government that happens to be in power. Monsieur Pierre Rameil (Deputy for the *Pyrénées-Orientales*) is to be congratulated on his energetic and progressive attitude, and for doing his best to help his party to maintain for France her supremacy in all matters connected with the Fine Arts.

French artistic organisation if not entirely suitable for the English mentality is, at least, pregnant with suggestions, and (at this moment of strenuous centralised effort on the part of the profession in England to win for the Mistress Art her proper place in the public estimation) is highly significant of what we may ultimately expect.



[Photo Daily Graphic.]

EXPERTS AT THE BUILDING EXHIBITION, April 11th, 1922.

A group at the opening of the Building Exhibition. Left to right:—Mr. E. J. Sadgrove (President of The Society of Architects), Mr. Paul Waterhouse (President, of the Royal Institute of British Architects), Mr. H. Greville Montgomery (Director of the Exhibition), Mr. A. J. Forsdike (Past President of the National Federation of Building Trade Employers), and Mr. H. J. C. Johnston (President of the Institute of Clayworkers).

The Social Side at Olympia.

Official receptions are rarely very popular functions, and when they are followed by a Banquet and a Fancy Dress Ball on the same evening, even the most social of souls shrinks from attending all of them. The social apex at Olympia was reached on April 21, when the Triple Architectural Alliance attempted to unify for the time being the representatives of the various sections of the Building Industry. Guests who attended the afternoon function in the Grill Room naturally had a warm reception, and those who were entertained in the evening in the Restaurant were generously fed up; some of them were already in that state with their endeavours to find a cloak room which kept open after nine o'clock. The President of the Exhibition, Mr. Waterhouse, who was in the Banquet Chair disguised as a Quantity Surveyor, was in his happiest vein, and was successful in securing the closure in time for the guests to welcome the Fancy Dress Parade, which invaded the precincts soon after 9 p.m. and preceded the Ball, on the success of which the organisers, the Architectural Association, are to be congratulated.

The Quintessence of Olympia.

CONTRIBUTED.

If a man begged to be allowed to pay us for a position in front of our houses; if he set about to entice our ears with the music of a hired orchestra; if he spent just over a fortnight displaying his wares to us by means of the most costly and elaborate trappings—we would not, one presumes, ascribe his diligence to an excess of prosperity in his business. True, there are millionaires who have turned propagandists in their riper years, but such have generally chosen an antithetical field to that which witnessed their earlier and more lucrative endeavours. It is time, then, that we reconsidered the Victorian idea of an industrial exhibition which unaccountably clings to us to this day. We still incline to a view which roughly amounts to this, that such an exhibition is merely an opportunity for the well-to-do tradesman (somewhat in the manner of Mr. Belloc in his Sussex Inn) to hold up his sovereigns for our collective admiration.

It is nothing of the sort; let us be clear on that point. An area which appears little short of that of a small park is taken up by several hundred manufacturers, some of whom employ architects (and all use considerable ingenuity) in the design of the stalls which are to enshrine their several excellences. A band plays almost continuously, to whose music, in these days of jazzery, the rumble of concrete mixers and the monotonous purr of geysers and shower-baths seem a pleasant enough sort of accompaniment. What is more, every user of the Architects' Welcome Club invitation to enter the busy precinct, ensures a voluntary contribution from the organisers of the Exhibition towards the assistance of needy members of the profession. We do not mean to imply that the eagerness with which an article, however meritorious, is thrust before the public affords a measure of the impecuniosity of its maker or seller. But it appears obvious that no man, whose work is not insufficient to keep him constantly engaged upon it, will be able, nay desirous, to devote his time to the mere demonstration of the virtues of his product. One may take it, then, that all these men are waiting (and here one remembers others less fortunate, if less capable, who wait, they too, along the pavements of our streets), are waiting to be invited to work for us: to build, to pave, to furnish for us: to make those houses we have been crying for all these years.

Now, what cannot fail to puzzle a good number of people is this. One comes (very largely by invitation) to view a number of strong and exquisitely coloured bricks, of the lightest, the most charming, the most efficient pantiles one could wish for; in short, an unbounded variety of materials and fittings, all of high quality and attractiveness. One then walks out into London—prolific and ubiquitous London—and wonders where to look for the houses that have been built of these bricks and tiles and made beautiful and comfortable with the many things one has just seen. To the average lay visitor, we fear, there cannot be the remotest shadow of a connection between all this display and the realities of architecture as he lives and breathes among them. This is the incongruity—this is the sadness of it all.

The question of houses, he remembers, has been mentioned in Parliament. But he does not preserve a record of the occasional gags wherewith the performers in one of the most widely appreciated of our national ceremonies enliven their (to them) somewhat perfunctory stage-business. He will only have a very vague idea of the part played by the Government in the housing affairs of the nation, and here it may be best for the architect to "put him wise." The architect has seen the effect of the

State Housing policy, which has been much the same as that of the trees in the old saw—briefly this, that it has become impossible to see the House for the Schemes.

The architect, while admitting that the Government appears to be able to deliver his letters without undue irregularity, will advise the visitor to put that factor out of his mind when he is confronted with a more serious problem than that of the embellishment of both sides of postage stamps. He will then remind the visitor that there was a time in England, incredible, fantastic though it may sound, when every man had a house which he called his own, and to which he and his family were in no slight degree attached. We do not expect the visitor to retort that the most widely quoted of all English songs was inspired by the *genius loci* of a furnished apartment. But let us imagine that the architect asks him where he lives.

Well, he will almost invariably live the detached, nomadic life of the modern tenements or chambers. Has he, then, never visualised the mind of the man who builds for a host of tenants, unknown to him except in so far as they are the main cause of depreciation of his property? Has it occurred to him that, even if the owner made a considerable profit out of such letting, he could be expected to take but little interest in the æsthetic susceptibilities of his ghostly occupant: or even in his mere animal sense of fitness and liveableness? If not, let him for a moment imagine the positions reversed.

At this point he may as well be told the truth of the whole matter. It is only right that he should learn why he must spend days travelling to and fro if he is to see a few hundred of these houses that the Exhibition proves within the bounds of the possible. He has been content to live in other people's houses. But houses are no longer a desirable investment. He has had houses built for him by persons who wished to put their savings to a profitable use. But these persons are investing their savings in aviation and celluloid films. It has been suggested by the Parliamentary Secretary of the Ministry of Health (and certainly not for the first time) that the people should be assisted to purchase their own houses. We appreciate the symptomatic importance of such a statement; but we would go a step further and ask: "Why should anyone buy a ready-made house?" There is a certain prejudice abroad against ready-made clothes; but a house has to last longer than a suit, and its imperfect fit will be more irksome in proportion to its length of life.

The visitor may now be left to draw his own conclusion. It is to him that the Building Exhibition is addressed. People have ceased to build houses for gain; they must begin to build houses to live in. Every intelligent architect knows that the best client—the client who gives him his finest opportunity—is the one who means to use the architect's product himself. Our hatters would rather discuss hats with us than with a deputed wife or aunt. The Building Exhibition is an urgent call to the man who wants a house that shall be his own rather than another man's, a call to the true client, and to the most firmly-rooted instincts in him. He may be bewildered by the choice before him. So much the better; his architect and his purse will guide him in that choice. He will notice, for instance, that the negroes of Timbuctoo are sending us more rubber than we really know what to do with. Well, he will be at liberty to abandon our native materials, beautiful but increasingly rare, if he cannot afford to pay for them. The principal thing is that he should build. The eyes of the once-helpful capitalist are turned elsewhere; the race of landlords is rapidly dwindling. Of the folly of waiting for a fall in prices we will not presume to speak; the daily Press is bringing down the last barricades of that superstition. He must take the cash in hand and waive the rest. Since everyone must lie in the bed he has made, he had better, at least, make it himself, and make it to his mind.

Proceedings of the Society.

An Ordinary Meeting of The Society of Architects was held at 28, Bedford Square, W.C.1, on Thursday, April 20th, 1922, at 6 p.m.

The President, Mr. E. SADGROVE, having taken the Chair, the minutes of the previous meeting, as printed in the Journal, were taken as read, and were confirmed and signed.

The following announcements were made:—Nominations: For Fellowship, 5; for Membership, 7.

ADMISSIONS:—

AS A LICENTIATE.—WILSON, GEORGE FELIX, "Y-Plas," Treboeth, Swansea.

AS STUDENT.—BODDY, ARTHUR, 62, Allington Street, St. Michaels, Liverpool; FISHER, JOHN JAMES, 77, Cecil Street, Hull; HURST, CHARLES LEONARD, 375, Hutton Lane, Bolton; ROGERS, DONALD JOHN, 96, Trinity Road, Handsworth, Birmingham; WATSON, CYRIL FREDERICK, Post Office, Mickleham, Dorking.

TRANSFERRED TO RETIRED LIST.—GEORGE, Rev. GEORGE FRANK, Lykoma, Nyasaland, Elected a Member, 1911.

RESIGNATIONS, MEMBERS.—JENNINGS, WILLIAM JOSEPH, J.P., F.S.I., 4, St. Margaret's Street, Canterbury; RIDGE, T., Bank Chambers, Oswestry.

STUDENT.—DEARLE, Miss DOREEN ESTELLE, Warra, Warwick Road, Coulsdon, Surrey.

DEATHS.—HECTOR, JOHN BLACK (Member), Architect's Dept., New County Hall, S.W.1., Elected 1920, Died March 31st, 1922; STOCKWELL, ARTHUR (Fellow), 11, Pilgrim Street, Newcastle-upon-Tyne, Elected Member 1903, Elected Fellow 1920, Died March 22nd, 1922.

ELECTIONS:—The following Candidates, whose nominations had been previously announced and published, were submitted for election under Articles 12 and 17 of the Articles of Association, and were declared to be duly elected:—

AS FELLOWS.—COLES, GEORGE, M.S.A., 32, Craven Street, Strand, W.C.2.; KITCHING, ROBERT RIDLEY, M.S.A., 21, Albert Road, Middlesbrough; RICHARDSON, THOMAS WILLIAM TURNBULL, M.S.A., 57, High Street, Stockton-on-Tees; YOUNG, WILLIAM GRAY, F.N.Z.I.A., 217, Lambton Quay, Wellington, N.Z.

AS A MEMBER.—JOLLY, JOHN B., 9, High Street, Chorley, Lancs.

The proceedings then terminated.

R.I.B.A. Exhibition of Contemporary Architecture.

An Exhibition of Contemporary British Architecture will be held in the Galleries of the Royal Institute, 9, Conduit Street, W. 1., from November 1st to December 16th, 1922.

All Architects in the British Empire are invited to submit framed and glazed exhibits of reproductions of their works executed or projected since the beginning of the 20th Century. There is no limit to the number of works which may be included in one frame, but the available wall space which can be allotted to any one selected Exhibitor is 15 square feet including the frames. Charges for packing and transport to and from the exhibition must be defrayed by the exhibitors, and the exhibits will be insured while in the custody of the R.I.B.A., who do not however incur any legal liabilities for loss or damage. The last day for the deposit of exhibits is October 7th, 1922, and those which are rejected must be removed by the exhibitors not later than October 22nd. The Exhibition opens on November 1st, 1922.

The Loan Library.

So far no disquieting number of book-parcels or cheques for the Library Fund has arrived at the Society's offices in reply to the appeal contained in our last number of the *Journal*. To tell the truth, we have not seen a single example of either. We therefore reiterate our invitation to members who may be willing to co-operate in our attempt to complete the collection of standard books.

The following books have been added to the Library during the last month :—

PROCEEDINGS OF THE SOCIETY OF ANTIQUARIES OF SCOTLAND, Session 1920-21. Vol. LV. ; Fifth Series, Vol. VII. ; Edinburgh : Published by the Society, 1921.

THE LATER RENAISSANCE ARCHITECTURE IN ENGLAND. Edited, with introductory and descriptive text, by John Belcher and Mervyn E. Macartney ; London : B. T. Batsford, 1897-1901. Six portfolios of illustrations.

ANCIENT GREECE*. By Stanley Casson, Fellow of New College, Oxford
London : The Oxford University Press, 1922.

The Other Side.

BOOKS ON CONTRACTS AND ARBITRATION.

Here is a book§ which is a veritable mine of data for the Contractor who has not as yet adopted any system of business management. The title is hardly expressive of the ground covered, and one is surprised to find such vexed problems as "income tax" dealt with. That it is essentially a Builder's Book makes it none the less valuable to the Architect, and particularly to the young Architect who has erred upon the artistic side of his training at the expense of the purely business side.

What "Spon's" is to the Surveyor Mr. Emery's volume† might well become to the arbitrator. It is a thoroughly up-to-date statement of the case. The necessity for revision will, of course, inevitably recur at intervals; even standard works may, in the space of a decade or so, become obsolete in essential matters. The student will no doubt derive more profit from this volume than the practitioner, whose only opportunities for polishing up his knowledge must be snatched on tedious journeys, or from the rare intervals of his work.

One perceives a need for terse, tabulated statements (if indeed such a thing were possible in so abstruse a subject); for it is not seldom that one finds more precious help from an index or appendix than from the main chapters. Whoever has the leisure to delve into these will find his labours amply repaid.

American Schools. ¶

The recent exhibition at the R.I.B.A. has brought American Architecture into fresh prominence. From the reproductions that we have seen of recent years, both at this exhibition and in the press, it is obvious that there are many things to be learnt from "the other side," especially with regard to monumental design.

* Presented by the Publishers.

§ Building Contracts: The Principles and Practice of their Administration. By Edwin J. Evans, with a Foreword by Sir Charles Ruthen, O.B.E. London: Chapman & Hall, 1922. Price 10s. 6d. net.

† Arbitration: A Manual of the Law and Practice relating to Arbitration under the Arbitration Act, 1889. By H. C. Emery, Solicitor, Secretary of the Institute of Arbitrators. H. Howes & Co., 1920.

¶ "Report on the Education of the Architect in the United States of America." By Robert Atkinson, F.R.I.B.A., London, the R.I.B.A.

To begin with, it is only natural, when one sees the fine work that is being done, to enquire into the system of training that has produced so many men capable of doing such work. Mr. Atkinson, in his masterly report, gives a complete answer to that query, and for this reason, all architects in practice, as well as those engaged in education, should become acquainted with the conclusions to which he has arrived.

The American system appears to be an amalgamation of the old Technical Institute with the Atelier system of the Ecole des Beaux-Arts, but this in turn seems to be giving way to a new system which promises to weld together the æsthetic education of the one with the technical training of the other, by means of a more general culture and a better understanding of the social needs and problems of the day. The success of American Architecture can, to some extent, be accounted for by the fact that it was, even under the old system, very intimately connected with the spiritual growth of the nation. As Mr. Atkinson writes, "Architecture is a National plant, cultivated by the profession, but drawing its life from the people."

It will be found that, generally, the organisation of the American schools is remarkably similar to that adopted here by the A.A., but that several useful lessons still remain to be learned from the United States. One of the chief dangers Mr. Atkinson found was that a long school course tended to divorce the Schools from the practical life of the profession, and he suggests that it is essential that students should spend their long vacation "on the job," to get a real grip of actual building and of modern construction, and urges practising Architects to give all the aid in their power to make this possible, by taking students into their offices during the summer vacation.

In spite of the magnificent achievements of the American Architects, there has been too great a tendency towards reproducing the masterpieces of other countries, and especially towards copying standard examples of fine ornament and decoration. It will only be a matter of time, one hopes, before this phase passes, and a really national style is evolved. Then one will no longer have the impression that the buildings one sees are Fifth Year student's work come to life.

The A.A. School is to be congratulated on having the benefit of the experience of such men as Mr. Robertson and Mr. Atkinson himself, both of whom are thoroughly familiar with the systems of training in America and France. They have evolved a scheme for England, which takes advantage of the experience gained in these countries, and have grafted it on to the traditional English training. A visit to the next annual exhibition of student's work will show that the English student is taking full advantage of the experience that their masters have gained.

Mr. Atkinson concludes his paper with the following words, which should be written in letters of fire in every architectural headmaster's sanctum:

"It would seem that it is more important for a student to learn to be wholly an Architect, than half a Draughtsman and half an Engineer. To that end education should be directed. Let taste be educated as imaginative and creative, rather than selective. Let our knowledge be of modern social conditions rather than of ancient æsthetic conditions, and here we have the whole field of communal planning. Let our experience be of the forms and strengths of the materials we ourselves are to employ in the future.

"Thus our Architect of the future will be a man of knowledge familiar with social problems, a man of taste, but a judge of rugged as well as of delicate beauty; a man with a sense of colour, familiar also with the laws of proportion, and composition. Then, given an artist and a philosopher, let him become a builder, a supervisor of labour in direct touch with materials, their possibilities and limitations.

"By such a training we might evolve a new generation of real Architects, who could handle the problems of modern building in direct relationship with cause and effect."

G.B.T.

Experiments in Picture Gallery Illumination.*

As a result of studying the illumination of picture galleries one can hardly fail to arrive at the conclusion that important factors, which ought to receive the most earnest consideration from those responsible for their construction, have been very largely neglected. The consequence is, that many of the most noted galleries, erected at great cost and housing pictures of inestimable value, are woefully deficient in the essential features of design which make for good lighting; and, except under special circumstances, picture lovers can seldom hope to see many of the world's masterpieces as they ought to be seen.

The reason of this is that very often little or no consideration has been given to the effect of reflection of light from the surface of the glass covering the pictures. The glass is necessary for their preservation from dust and dirt, but, unfortunately, for the spectator, in many pictures the light reflected from the glass may be equal to or greater than that reflected from the darker parts of the picture. Clear glass reflects some 10 per cent. of the incident light; and, though it may be possible to reduce this by a small amount, methods so far suggested would probably have disadvantages considerably out-weighing any benefits attainable. It is often impossible to study pictures properly, without either removing the glass or hanging a dark curtain behind the observer, as is commonly done when photographing them.

The importance of the 10 per cent. mentioned above will be realised from the fact that, while the reflection ratio of pictures of a light tone has been found to be as high as 50 per cent., that of Rembrandt's *Portrait of Himself*, for instance, is only 3·7 per cent., and of his *Portrait of a Jewish Merchant* only 1·5 per cent. It follows that the brightness of the image of a visitor's dress of a light colour (having a reflection ratio of, say, 80 per cent.) formed by reflection in the glazing which has a reflection ratio of 10 per cent., will be 8 per cent. Thus the reflected image of the dress may not infrequently be brighter than the painted surface. It follows that in a very large number of cases the light reaching the eye by reflection in the glass from light-coloured objects will be of the same order of magnitude as that from the picture itself. In addition, it should be noted that the images seen in the glazing are not in the plane of the picture, so that there is constant effort necessary on the part of the eye to keep the latter in focus.

Realising the unsatisfactory condition of affairs, Sir Frank Baines, of the Office of Works, after giving very careful consideration to the subjects involved, referred to the National Physical Laboratory a design of a roof which should diminish to a very considerable extent the trouble due to reflections from the glazing. The main idea is to reduce, as far as practicable, the general lighting on the floor of the gallery, so that spectators will be illuminated as little as possible; and yet to provide adequate illumination on the walls.

The roof is designed with a valley along the centre, the portion facing the pictures being glazed.

It is, of course, impossible to prevent reflection from pictures on the opposite wall; and, short of using a dark curtain along the length of a gallery, the best way to minimise the effect is to keep the picture frames and the wall decorations, especially those above the picture line, low in tone—preferably somewhat lower than the average tone of the pictures. The experiments which have been made on these two points indicate the

* From a Lecture on THE LIGHTING OF PUBLIC BUILDINGS by E. H. Rayner, D.Sc., J. W. T. Walsh, M.A., M.Sc., and H. Buckley, B.Sc., of the National Physical Laboratory, delivered before the Illuminating Engineering Society at the House of the Royal Society of Arts, Adelphi, on Tuesday, March 28th, 1922.

great value of the help resulting from the application of this principle of "monotony" in reducing the obtrusiveness of the inevitable reflections occurring in galleries hung with pictures on both sides. A design of the type put forward by Sir Frank Baines obviously reduces very considerably the total amount of light entering the room, as compared with galleries of which the roof is nearly all glass. It was one of the chief aims of the investigation undertaken by the National Physical Laboratory to determine whether, with this reduction, sufficient illumination would be obtained on the pictures under the daylight conditions prevailing in London.

The question of orientation was of first importance, and it was considered that the most likely use to which such a design might be put would be to a gallery running east and west.

In such a gallery it is necessary to keep the sun off the north wall. The National Physical Laboratory advised that the best way to prove any design qualitatively and quantitatively was to make preliminary experiments on a scale model, since illumination values would be independent of scale. They also suggested that direct sunlight should be kept off the north wall by a vertical screen of sufficient height, which should be highly reflecting on the north side, and so make use of light from the north part of the sky for illuminating the pictures on the north wall, light from the same quarter naturally being incident on the south wall. In this way, by adjusting the height and position of the screen, the illumination on the north and south walls might be made sufficiently equal, so that no material difference between them would be noticed whether the sun were shining or not.

A model was therefore built in the yard of the National Gallery to a one-third scale of a room 80 ft. by 40 ft. Experiments were made in various kinds of weather on the height and position of the screen and on the decoration of the walls. The quantity measured was the daylight factor, which, for the purpose of these experiments, was defined as the ratio of the illumination on a small *vertical* part of the wall to the illumination on a *horizontal* area out of doors, shaded from direct sunlight. Similar illumination measurements were also made in a number of the rooms of the National Gallery.

The general results were that a design on the lines proposed with a screen of a height suitable for preventing sunlight reaching the north wall, it was possible to equalise the illumination on the north and south walls, to have the walls decorated in a suitable low tone, and yet provide adequate illumination on the pictures. The general illumination on the floor of the room was reduced to about a quarter of that in some of the existing galleries.

The application of the general design is somewhat simpler in the case of a gallery with length east and west than in the case of one with its length north and south. Without any screens a north and south gallery would have the sun on the west and east walls in the morning and afternoon respectively, and for the whole day on parts of the north wall. For the purpose of experiments on methods of overcoming these difficulties the model was turned through an angle of 90° and transverse screens were fixed between the roof ridges. Various distances between the screens were tried and they were hinged at the top so that the lower edges could be pulled towards the south. In this way a given area of screen is somewhat more economically used than when in the vertical position, and light from the north part of the sky is rather more used than that from the south part. The illumination towards the south end of the gallery is thereby also made practically equal to that of the north end. The general results are very similar to those obtained with the model when its length was east and west.

Circumstances have not yet permitted the construction of roofs on these lines to be undertaken.

Report of the R.I.B.A. Council, 1921-22.

The following extracts from the Report on the R.I.B.A. of April 22, 1922, relate to matters of special interest to the Society as being associated with the Institute in their deliberations on the various subjects.

THE INTERNATIONAL BUILDING TRADES EXHIBITION.—The Royal Institute has again co-operated with the Architectural Association and the Society in organising the Architects' Welcome Club for the benefit of Architects visiting the International Building Trades Exhibition at Olympia.

UNIFICATION AND REGISTRATION.—On May 12, 1921, the Unification and Registration Committee held a largely attended meeting for the purpose of considering the report of the Sub-Committee. A full report of this meeting and of the decisions arrived at was published in the *Journal* for May 20, 1921. On May 23, 1921, the Council approved the four resolutions of the Unification and Registration Committee and entered into negotiations with The Society of Architects. Before any decisive steps were taken it appeared to be advisable to ascertain the views of the members of the Associate class. A general meeting of Associates was held on June 7, 1921, at which a Committee, subsequently strengthened by representative Associates from the Provinces, was formed. This Committee is giving the most careful consideration to the whole problem, and the Council's negotiations with The Society of Architects have been suspended until the Committee has reported. On February 7, 1922, at a Special General Meeting, a resolution was moved by Mr. A. W. S. Cross to the effect that there should be no alteration in the constitution of the Royal Institute until after the passing of a Registration Act. One hundred and twelve members voted in favour of the Resolution and sixty-six against. The By-laws require a two-thirds majority which was not obtained, and the Resolution was consequently not carried. A statement on the present position of the Unification and Registration movement was issued to members by the Council on March 18.

ARCHITECTS AND THE NATIONAL HOUSING SCHEME.—On July 4, 1921, the provisional agreement with the Ministry of Health on the subject of the fees payable to architects in connection with abandoned or partly abandoned Housing Schemes was rejected by the General Body. After consultation with housing architects, the Practice Standing Committee requested the Council to summon a General Meeting for the purpose of electing three delegates with full powers to negotiate a settlement with the Ministry of Health. This measure was approved by a General Meeting on November 28, 1921, and Mr. H. T. Buckland [F.], of Birmingham, Mr. Francis Jones [F.], of Manchester, and Mr. Herbert A. Welch [A.], of London, were duly elected as delegates of the Royal Institute. After fresh consultation between the Practice Standing Committee, the Housing Architects, and the delegates, a meeting with the Ministry of Health was arranged. The delegates, accompanied by the President, were received at the Ministry on March 22, and the negotiations are now going on.

A NATIONAL BUILDING CODE.—A Joint Committee, consisting of representatives of the Science and Practice Standing Committee, with power to co-opt other Members, has been appointed for the purpose of drafting a new National Building Code. It is hoped that such a Code, if embodied in a Bill, will receive the warm support of the Ministry of Health.

CONDITIONS OF CONTRACT.—A Conference attended by representatives of the Royal Institute, the Surveyors' Institution, the Quantity Surveyors' Association, The Society of Architects, the Institute of Builders, and the National Federation of Building Trades Employers, has been summoned for the purpose of preparing an agreed form of conditions of contract for the building trade for England and Wales. The Conference has requested the Government to appoint a neutral chairman to preside over a tribunal to which all points of difference that arise in the drafting of the Form are to be referred.

BOARD OF ARCHITECTURAL EDUCATION.—The Council have appointed the Advisory Members of the Board including Mr. L. Sylvester Sullivan as the representatives of The Society of Architects.

FEES ALLOWED BY QUEEN ANNE'S BOUNTY.—On the receipt of complaints as to the inadequacy of the scale of fees allowed by Queen Anne's Bounty Office, the Committee recommended the Council to take up this matter with a view to getting the Institute Scale accepted. As a result of the Committee's action a new scale has been issued by the Q.A.B. Office. Unfortunately, however, the Committee were not consulted by the Q.A.B. Office in the drafting of the new scale, and although the new scale is a distinct improvement on the old one, it is in several respects unsatisfactory. The Committee are therefore in communication with certain Members familiar with work financed from Q.A.B. funds with a view to considering whether any further useful action can be taken.

BUILDING BY-LAWS.—The Science Standing Committee have considered the question of Building By-laws as at present constituted. The Committee find that the present Building By-laws are in themselves opposed to the science of building; that under existing Building By-laws there is no incentive for manufacturers or inventors to improve on existing methods and materials; that as the relaxation of Building By-laws under Section (25) of the Housing, Town Planning, etc., Act 1919 expires in July of this year, it is desirable to establish a new building code for the encouragement of science in building. The Science Committee decided to ask the Practice Standing Committee to appoint members to a Joint Committee to consider the whole subject. This Joint Committee has been formed consisting of four members from each of the Practice and Science Standing Committees of the Royal Institute of British Architects, with power to co-opt other members.† The question of the revision of By-laws in Sanitation has been placed before the Science Standing Committee by the Council and this matter will also be dealt with by the Joint Committee on Building By-laws.

JOINT SUB-COMMITTEE ON COMPETITIONS.—A Joint Sub-Committee has been formed of Members of the Committee and Representatives nominated by The Society of Architects, which has under consideration the preparation of a report upon Premiums, Regulations for, and Conduct of Architectural Competitions, and other matters.

The New Zealand Institute of Architects' New Secretary.

Mr. E. C. CACHEMAILLE has been appointed to the position of Secretary to the New Zealand Institute of Architects, in succession to the late Mr. W. Beauchamp-Platts.

† The Society of Architects has two representatives on this Joint Committee.

The Architectural Scholarship, 1922.

VALUE £15. OFFERED FOR MEASURED DRAWINGS.

The Scholarship is awarded for Measured Drawings, and the Competition is confined to Licentiates and Students of the Society.

Candidates are required to submit at least three and not more than four sheets of measured drawings and details of some building of historic interest.

The drawings must be prepared between January and September, 1922, and are to be executed on imperial size paper, and delivered carriage paid at the Society's Offices, 28, Bedford Square, London, W.C.1, on or before September 30th, 1922, together with the original sketches and notes.

The drawings must be without name, motto, or other mark of identification, and must have attached thereto a plain sealed envelope containing the Competitor's name and address and a signed and attested declaration that the drawings are the Candidate's unaided work.

The drawings will be numbered as received, and a corresponding number placed on the envelope, which will not be opened until after the award has been made by the Assessors and confirmed by the Council.

The Scholarship is of the value of £15, and will be disbursed by the Council on behalf of the holder.

The award will be made by the Council subject to their approval of the manner in which the Candidate proposes to utilise the Scholarship, or alternatively, to the Candidate agreeing to such a scheme as the Council may decide upon.

Should the scheme not call for the payment of so much as £15, the holder may receive the value of the balance in books or instruments.

The Council will not be responsible for any loss or damage that may occur to any drawing or document submitted in connection with this Competition, nor for any delay in delivery.

The Council reserve the right to exhibit and/or reproduce the drawings, and their decision on any matter arising is to be final.

The Scholarship may only be held once by the same person.

A Candidate who does not adhere to the conditions in every particular, will be disqualified.

The Atelier.

This Atelier is one of the Royal Academy Ateliers, and membership of it confers a distinction which is valued by those who are acquainted with the qualifications of the Patron, who regulates admission. There are at present a few vacancies, and those who desire further information should apply, preferably personally, to the Patron, M. Chaurès, at the Atelier, or to the Hon. Secretary, at 28, Bedford Square, W.C. 1.

New Membership Certificate.

By-law 5.—Members elected previous to June, 1920, who desire to exchange their certificates for the new form of membership certificate issued since that date may do so on returning their original certificate to the Society and paying a fee of five shillings.

Such certificates shall bear the original date of election, but the signatories will be the officials of the Society for the time being empowered to sign such certificates.

The Victory Scholarship Competition Regulations, 1922.

"The Victory Scholarship" competition, £100 and the Gold Medal of the Society, is open to any persons not exceeding 35 years of age, who are British subjects, and will consist of designs in architectural composition. The Scholarship can only be held once by the same person. There is no entrance fee.

1. The Jury of Assessors are the Patrons of the Royal Academy Ateliers, a representative of each recognised School of Architecture entering two or more Students for the preliminary Competition and representatives of The Society of Architects. The decision of the Jury will be final and binding on the Competitors.

2. The Competition is divided into two parts as follows :—

Part I. A twelve hour sketch competition conducted *en loge** under supervision at a place designated by the Jury, who will also set the subject. The sketches will be officially stamped by a representative of the Jury, and will be exhibited and assessed by the Jury, who will designate a maximum of ten competitors eligible to enter for Part II. of the competition.

Part II. A twelve hour sketch competition held *en loge** in London, limited to the selected competitors who will make and preserve a copy of their sketch which will form the basis on which the final design must be completed within one month. Such competitors, after having produced their twelve hour sketch, may receive the assistance and criticism of their masters and fellow students, but any serious deviation from their original sketch, or any insufficient rendering of their final design will disqualify the competitor.

**The term "en loge" signifies that the competitors will be isolated and must produce their sketches from the given programme without reference to books or documents and without consultation. Any competitor infringing this rule will be disqualified.*

3. Entries close on May 17, 1922. Part I. of the competition will be held in the Society's Atelier, 28, Bedford Square, London, W.C.1, and in other centres as may be arranged, on Saturday, June 10, 1922, and Part II. on Saturday, July 15, 1922, commencing in each case at 10 a.m. The final designs in Part II. may be developed at any place convenient to the competitors.

4. Candidates must bring with them drawing boards, tee squares and other instruments, and also rations for twelve hours, as they will not be allowed to leave the building during the Competitions.

5. The Programmes will be handed to the Candidates in sealed envelopes on the days appointed for the Sketch Competitions and the subjects will not be previously disclosed.

6. Each Competitor's original stamped sketch in Part II. will be retained by the Jury and afterwards attached to his finished designs, and if, in the opinion of the Jury, the main conception of the sketch has not been adhered to, the Competitor will be disqualified.

7. The finished designs will be exhibited and assessed by the Jury, who will award the prize to the author of the design they consider the best, subject to the standard being sufficiently high to merit the award, otherwise the award may be varied or withheld, in which latter case the money may, at the discretion of the Council of the Society, be added to the General Fund with the view of subsequently increasing the value of the prize.

If, in the opinion of the Jury, two designs are of equal merit, the prize may be divided and the Medal duplicated.

8. The winner may utilise the prize money for any educational purpose approved by the Jury.

9. The Council of The Society of Architects reserves the right to vary these conditions from time to time, and their decision on any matter arising is to be final.

10. All communications must be addressed to the Secretary of The Society of Architects, 28, Bedford Square, W.C.1, where entry forms may be obtained.

The Royal Sanitary Institute.

HENRY SAXON SNELL PRIZE.

The Prize in the year 1922 will consist of Fifty Guineas and the Medal of the Institute, and is offered for an Essay on "Improvements in the Sanitary Appliances and Fittings for new Housing Schemes, having regard to Efficiency and Economy."

The Essay is to consist of not more than 5,000 words, to be typewritten on foolscap, one side only, and to be illustrated by drawings or sketches, and must be delivered on or before August 31st, 1922, addressed to the Secretary of The Royal Sanitary Institute, 90, Buckingham Palace Road, London, S.W. 1, from whom particulars of the conditions may be obtained.

The Beaux Arts Committee.

Since the establishment of the First Atelier of Architecture in London by the Beaux Arts Committee in 1913, the Honorary Secretaryship of the Committee has been undertaken by Mr. C. McArthur Butler, who has now relinquished it owing to the pressure of engagements as Secretary of the Society of Architects. His successor is Mr. Cart de Lafontaine, whose acceptance of the position will be regarded by all who are acquainted with his qualifications as a good augury for the further progress and development of the Committee's educational activities.

The work of the Committee and of the Atelier will continue to be carried on at 28, Bedford-square, W.C. 1, and Mr. McArthur Butler's experience will be at the disposal of the Beaux Art Committee, of which he remains a member.

Presentation to the President.

Past and present members of the Council of The Society of Architects entertained the President, Mr. E. J. Sadgrove, to dinner at the Café Royal on April 30. The chair was occupied by Major E. C. P. Monson, Past President, who was supported by the four Vice-Presidents, Messrs. Geo. H. Paine, Major C. F. Skipper, Thos. Wallis and A. J. Taylor, the Honorary Secretary, Mr. L. Sylvester Sullivan, Past V.-P., the Honorary Treasurer, Mr. E. J. Partridge, Past V.-P., the Honorary Librarian, Mr. Noel D. Sheffield, Past V.-P., Mr. Percy B. Tubbs, Past President, and Messrs. Major Harry Barnes, M.P., Ellis Marsland, H. M. Robertson, G. C. Vernon-Inkpen (Portsmouth), A. Burnett Brown, Past V.-P., H. A. Cooper (Kettering), George Baines, Past V.-P., P. B. Houlton (Chesterfield), G. Blair Inurie, W. G. Ingram, Grahame B. Tubbs, J. A. Bowden, W. J. Martin and C. F. Norman. During the evening the Chairman, on behalf of the subscribers, asked Mr. Sadgrove's acceptance of a silver tea and coffee set and a gold cigarette case, suitably inscribed, as a memento of his four consecutive years of office as President.

A number of other members joined in personally associating themselves with the observations of the Chairman in his allusions to the valuable services rendered to the Society by Mr. Sadgrove, and those who had been prevented by sickness or pressing emergencies from attending, wrote conveying their good wishes. A very pleasant evening was brought to a close by the President's reply, in which he succeeded in conveying to his colleagues his appreciation of their personal kindness and his indebtedness to them for their consistent support.

Notices.

By-law 51. A member (in any class) shall be deemed to have knowledge of any by-law, regulation, rule, announcement or other notice issued by the Society or by the Council and published in the Journal as if the same had been served separately and personally or by post upon such members, but in all matters affecting the alteration of the Society's Articles of Association notice shall be sent to all members as provided by Articles 68 and 69 of the Society's Articles of Association.

Current Competitions.

Particulars of the following Competitions have been filed with the Society:—

IPSWICH WAR MEMORIAL.

NEWPORT (MON). WAR MEMORIAL.

Employment Register.

Members who need temporary or permanent assistance at their own offices or elsewhere in any part of the Kingdom or abroad are asked to send particulars of their requirements to the Secretary, who will be pleased to put them into touch with unemployed Architects.

Victory Scholarship Fund.

Donations to this fund have been received from Mr. R. H. Shrewsbury, Mr. Ernest Bower, Mr. S. Robinson, and Mr. R. W. Merchant, which are included in the sum of £737, the amount at which the Fund at present stands.

The Council hope that any Members who have not yet subscribed will make some contribution to the sum of £1,265 required to complete the Fund.

Masonic Lodge 3244.

A regular meeting of The Society of Architects Lodge No. 3244 will be held at the Holborn Restaurant, on Wednesday, May 10th, 1922, at 5 p.m., when several degrees will be conferred and other Masonic business transacted. Members of other Lodges who desire to attend are asked to communicate with the Secretary, at 28, Bedford Square, W.C. 1.

Addresses Wanted.

The Society's Journals sent to the following members, &c., have been returned through the post. The Secretary will be glad to hear from anyone who can put him in communication with any of these members.

MEMBERS.—V. S. Barnes (Stroud), F. A. Coyle (Consett), J. W. Cropper (Manchester), A. Forrest (Johannesburg), D. J. Fyvie (London), W. P. Hack (Stamford), C. A. Hall (Bedford), E. F. Hill (Newbury), C. Wright Marles (Ventnor, I. of W.), T. E. S. Pitt (Yeovil), A. W. Street (Corsnam), E. C. Surtees (Barnard Castle), E. F. Tomlins (Golders Green).

STUDENT.—S. J. C. Denning (Tiverton).

Ordinary Meeting, May 11th, 1922.

An Ordinary Meeting of The Society of Architects will be held at 28, Bedford Sq., London, W.C. 1., for the election of new members, and any other routine business.

The Society of Architects.

Sessional Arrangements, 1922.

Subject to additions and revisions of which notice will be given in the Journal.

May	1	Last day for submitting Traveling Studentship Designs.	Aug.	1	Local Hon. Secretaries' reports due.
"	3	Membership Examination closes.	"	7	Last day for delivering Preliminary sketch designs in Part I of the second half-yearly Design Competition.
"	4	Practice Committee 3.30 p.m.			
"	10	Masonic Lodge 4.30 p.m., Holborn Restaurant.	Sept.	1	Local Hon. Secretaries' reports due. Entries close for October Membership Examination. Issue of Library books resumed.
"	11	Council 5 p.m.—Ordinary Meeting 6 p.m.	"	7	Council Meeting 3 p.m.
"	17	Entries close for "Victory Scholarship" Competition.	"	22	Membership Examination opens.
June	1	Local Hon. Secretaries' reports due.	"	29	Michaelmas Day.
"	4	Whit Sunday.	"	30	Last day for delivering Nominations for Council and Architectural Scholarship Drawings.
"	5	Bank Holiday.			
"	8	Practice Committee 3.30 p.m.	Oct.	1	Local Hon. Secretaries' annual reports due.
"	10	Victory Scholarship Competition Part I.	"	5	Practice Committee 3.30 p.m.
"	15	Council 5 p.m.—Ordinary Meeting *	"	9	Last date for delivering Ballot Papers for Council Election, and for depositing Final designs in Part II of the second half-yearly Design Competition.
"	24	Midsummer Day.	"	11	R. A. Chapter, 5 p.m., Holborn Restaurant.
July	1	Local Hon. Secretaries' reports due.	"	12	Council 5 p.m.—Special General Meeting 8 p.m. Election of Council for 1922-23.
"	15	Victory Scholarship Competition, Part II.	"	31	End of Session.
"	31	All borrowed books to be returned to the library for revision of catalogue.	Nov.	3	Membership Examination closes.

* The time and other details of the Ordinary Meetings will be announced in the Journal.

THE
Journal
OF
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Including Transactions and Architectural Notes.

No. 8. Vol XV.

JUNE, 1922.

New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.

***The Present Position of Architectural Registration.**

It is now approaching forty years since the question of Architectural Registration began to agitate the minds of architects and to form a subject of discussion in the professional Press. The Society of Architects was then established, mainly with a view to furthering the principle of the statutory registration of architects. Ever since the question has, in this country, been viewed from much the same standpoint as in England, because the conditions were, to a large extent, similar, though differing in detail, and the legislative sanction necessary to accomplish the object aimed at was identical. Now, however, the recent political changes in Ireland have placed the question on an entirely new footing, and it is conceivable that the statutory registration of architects may, in the near future, in this country, become a question of much more practical politics than in England. It is therefore interesting to note how the matter stands in England, and see what bearing it has upon the matter here.

When the Society of Architects was first established, and for a long time afterwards, it stood alone for the principle; the British Institute was for many years opposed to it. In those days there was a large element in the profession which held that the qualification of a man to practise architecture could not be tested by examination, that the artistic qualities required were too subtle to admit of such a test; that some of the best architects might be excluded, and some of the poorest designers admitted under such conditions. The British Institute, however, adopted the principle of examination as one condition of admission to its ranks, but not as its only test. Gradually the registration movement spread, until the bulk of the English professional societies, the Irish Institute, and eventually the British Institute adopted registration as a "plank." From time to time The Society of Architects promoted Bills in Parliament, but without success. More recently, the British Institute took up the matter, but failed to advance it a step further. And there the matter stands.

The position has been that the promoters of registration have failed to convince the legislature, or the Government, that the making of the profession of architecture

* From the *Irish Builder and Engineer*, April 8, 1922.

a close one, in which the designing of buildings would be confined to registered architects, was necessary in the public interest, the safety of the public being safeguarded, or capable of being guaranteed by the existing Public Health Acts and other similar enactments; that this constituted the vital difference between the conditions governing professions of medicine or law, and in a degree that of dental surgery, and those relating to architecture. The dentists obtained a Registration Bill years ago, but it has been generally recognised as ineffective in protecting their profession against the competition of unqualified men. Moreover, the disabilities of the architectural profession in suffering from similar competition, were held not to be matters for State intervention. Further, it was generally understood that a condition accompanying the passing of any restrictive legislation, must be the inclusion and registration on a roll, of all existing practitioners as they stood, regardless of their real qualifications. In fact, such legislation would give them, in effect, a diploma. The advocates of registration were content to pay that necessary price, in the belief that the next generation of architects would reap the benefit. At the same time a minority of architects continued to hold the view that registration would not advance the cause of architecture one iota, even if it served the interests of the architects.

The long drawn out crusade in favour of registration showed such small results, notwithstanding the conversion of the majority of the profession to the principle, that many men began to seek for an alternative to it, and at the present time, the Council of the British Institute believe they have found it, in what has become known as "Unification," a scheme whereby the whole profession of architects now practising might be united in one body, able to speak and act on their behalf with one authoritative voice. A committee has been appointed by the Institute to consider and report on this matter, the principle being already accepted. The Committee has not yet reported, but it is plain that if any effect is given to these proposals it necessarily involves opening the doors of the Institute very wide indeed. To this course there has been expressed very strong opposition by an influential section of the Institute, who see in this widening process, preceding registration, a distinct and serious lowering of the status of membership of the Institute, without any corresponding advantage to the profession, or any advancement of the art of architecture. This feeling culminated in the calling of a special meeting of the Institute by requisition, to express the view that it should not be proceeded with pending the attainment of registration. It is now generally recognised that the chances of obtaining the statutory registration of architects in Great Britain in the near future are small indeed. The meeting was held the other day, and was of quite a heated character.

An amendment was proposed deprecating public discussion, pending the publication of the report of the committee, but was lost by 118 votes to 80. The original motion being put, 112 voted for it and 66 against, but not securing the necessary two-thirds majority, it was lost. Another half-dozen votes would have given it effect. The matter, therefore, stands undetermined. Doubtless, however, the discussion and the result of the vote, will cause the Council to very carefully reconsider the taking of any step which may seriously lower the prestige of the Institute, without conferring any compensating advantage, and may even still further retard the coming of registration.

The discussion effects us only indirectly in Ireland, especially in the altered political relations of the two countries, save as an example, for the membership of the R.I.B.A. is very small in Ireland. But indirectly it has an important bearing, for it points very clearly to the fact that pending the inauguration of some system of registration, the standard of membership of the Institute should be maintained at the highest possible level,

Travelling Studentship, 1922.

The Assessors' Award.

Four sets of designs were received in this competition which closed on May 1st, 1922. The subject was "The Shop Front of a Retail Bookseller's and Newsvendor's Establishment." The assessors, Messrs. PERCY B. TUBBS, L. SYLVESTER SULLIVAN, H. M. ROBERTSON and THOS. WALLIS, have withheld the silver medal and have awarded a prize of £10 10s. to the author of the design marked No. 1, Harold ANDERSON (student) of Grove Cottage, Blean, near Canterbury.

The drawings may be seen at the Society's headquarters, 28, Bedford Square, W.C.1, between 10 a.m. and 5 p.m. or later by arrangement with the Secretary.

Proceedings of the Society.

An Ordinary Meeting of The Society of Architects was held at 28, Bedford Square, W.C.1, on Thursday, May 11th, 1922, at 6 p.m.

In the unavoidable absence of the President, Mr. E. J. SADGROVE, the meeting appointed Mr. GEO. H. PAINE, a Vice-President, to take the Chair, and the minutes of the previous meeting, as printed in the Journal, were taken as read, and were confirmed and signed.

The following announcements were made:—Nominations: For Fellowship, 1; for Membership, 4.

ADMISSIONS:—

AS A LICENTIATE.—PULFORD, J. F., Maldon, Essex.

AS STUDENTS.—DAVEY, WILFRED WILLIAM, 11, Hampstead Road, Preston Park, Brighton; DYER, HARRY WILLIAM JAMES, 76, Milton Road, Portsmouth; PATTERSON, ARTHUR NISBET, 99, Leander Road, Thornton Heath, Surrey.

RESIGNATIONS, STUDENTS.—GEORGE, A. S., Langstone, Tuffley Avenue, Gloucester; LAWTON, W., 227, Buxton Road, Macclesfield.

ELECTIONS:—The following Candidates, whose nominations had been previously announced and published, were submitted for election under Articles 12 and 17 of the Articles of Association, and were declared to be duly elected:—

AS FELLOWS.—BROWNE, PERCY LINDSEY, Pearl Buildings, Northumberland Street, Newcastle-upon-Tyne; FOSTER, ALFRED, 73, Chancery Lane, W.C.; GAMON, CHARLES EDWARD, M.S.A., Victoriaborg, Accra, Gold Coast Colony; MEYERS, SYDNEY HERBERT, M.S.A., 8, Railway Approach, London Bridge, S.E. 1; SCOTT, WILLIAM H., M.S.A., 18, Queen Street, Cardiff.

AS MEMBERS.—DAVIES, NORMAN JAMES, 23, Lynthorne Road, Frizinghall, Bradford; FOLLETT, SYDNEY GEORGE, Cangallo 666, Buenos Aires; GLOVER, KENNETH, Pearl Buildings, Northumberland Street, Newcastle-upon-Tyne; KING, HENRY FOSTER, King's Buildings, Fort, Bombay; PROSSER, DONALD SYDNEY, A.R.I.B.A., L.S.A., 6, Harvist Road, N.W. 6; TRACEY, LEONARD WALTER, 171, Alexander Road, Acocks Green, Birmingham; VAN BAARS, FRANCIS WILLIAM, LIC.R.I.B.A., 26, Ronald Park Avenue, Westcliff-on-Sea.

In answer to an enquiry, the Chairman stated that no reply had yet been received from Sir CHARLES T. RUTHER to the Council's letter of February 7th last calling upon him as a Fellow of the Society either to withdraw or substantiate certain statements in his paper on "The Architect and the State."

A motion calling upon the Council to press for a reply, was moved, seconded, put to the meeting, and declared to be lost by one vote.

The proceedings then terminated.

Building Arbitrations.*

By ALAN E. MUNBY, F.R.I.B.A., PRESIDENT OF THE YORK AND EAST YORKS
ARCHITECTURAL SOCIETY.

An Arbitrator may be appointed in several ways. He may be empowered to act by a judge of the High Court, in which case his authority is assured and he is responsible to the Court. He may be nominated by the Court as a referee. There are also a number of special appointments provided for under special acts outside the scope of building. I shall, however, confine myself to the usual cases of appointment by consent before or after the dispute and to the work of a single arbitrator, which covers most of the ground. Provided the parties agree to his appointment, anyone may be an arbitrator, that is, qualifications for the position are not legally necessary, though it need hardly be added that they are usual and desirable.

Once approached, the first thing is to guard against anything which, however unjustly, can be alleged as partiality. It not infrequently happens that one side, either the principal or more usually his legal or other representative, will call or ask to call just to explain matters in an informal way. Again, documents may be sent by one side for perusal, with a gratifying letter paying tribute to the merits of the Arbitrator—real or supposed. Any such attempts to “get in first” are in the worst interest of the party attempting them if the other side is cleverly advised. Preliminary interviews by one side must be, with every politeness, refused and documents opened inadvertently sealed up (best in the presence of a witness). Of course one side must usually first approach the Arbitrator and it is generally the aggrieved party who takes this course, the other side complying unwillingly. On such appeal the prospective Arbitrator should write an identical letter to both sides requesting evidence of a formal submission to arbitration, or if this has been tendered by the party applying he should send particulars to the other side, who will necessarily be cited, and ask for their comments as to the submission being in order. The source of the Arbitrator's appointment should also be stated to the other side. When a written contract between the disputing parties exists, it will usually contain an arbitration clause which itself forms a submission and by which the parties are bound in reference to the appointment of an Arbitrator. In such cases the clause usually provides powers enabling one side to make the necessary appointment, after which the Arbitrator can begin to act. If the Arbitrator is not named in this submission, means for his selection will be provided enabling one side to proceed to the appointment, and this being in order and the Arbitrator having no interest in the dispute, he can begin his duties. But should the other side neglect to attend when called upon or refuse to reply to correspondence so requesting them, the Arbitrator will be well advised to exercise some patience and to still acquaint the delinquents of all proceedings and of his proposed action.

Occasionally one side will object to the Arbitrator, and I have experienced this on taking up a dispute, the settlement of which was delayed by the death of the original Arbitrator, and in which the Official Trustee was a joint respondent. In this case I adopted the usual course of having my appointment confirmed by the Court, a matter carried through by the appealing party's solicitors at, for the time being, their expense.

If the Submission has to be drawn in consultation with the Arbitrator it is well to make it wide. For example, “all matters in difference which have arisen or during

* From a Paper read before the York and East Yorks Architectural Society at York, and published in the R.I.B.A. Journal May 6th, 1922.

the arbitration shall arise between—and—touching—.” It should also be mentioned that the arbitration is one under the Act of 1889, if, as usual, this is intended. This imparts definite powers as to procedure and includes questions of costs. The Submission requires a 6d. stamp, but variations in its terms may be made by mutual consent.

It is very desirable that a Submission should contain a clause obliging the parties to take up the Arbitrator's Award within a short limited period and to pay the fees therefor. Building contracts as a rule do not include such a provision, as though the Arbitration Act empowers an Arbitrator to assess costs and determine the manner of payment, there appears curiously to be no obligation to take up the Award. Should it happen that the parties, seeing during the hearings that neither is likely to win decisively, agree to settle their differences privately, they may neither of them take up the Award, when the Arbitrator may have great difficulty in obtaining his fees and costs.

Less simple are cases by no means infrequent, where there is nothing but a verbal contract or an inadequate document not providing for arbitration. In these cases unless the parties agree between themselves on the Arbitrator there appears to be no means of forcing an unwilling party to accept an appointment made by the other side. If there is no obligation to invoke arbitration and one party refuses, the other must bring an ordinary action, when, if the matter is technical, this will probably be referred to an Official Referee, who himself often wants technical advice. If this probability can be brought home to the unwilling party it may sometimes induce him to accept an Arbitrator by agreement. If the prosective Arbitrator ultimately fails to secure his position he is quite at liberty to act as the representative of one side in any proceedings which may subsequently develop under another Arbitrator or in the Courts.

Safely steered into his official position the Arbitrator may now begin his duties and exercise his powers. These are very considerable; he may administer the oath, hear or refuse to hear or peruse evidence, he may even commit for contempt of his Court. He has, in fact, all the powers of a judge, save that he must not deal with matters of law if objection is taken.

The first step is usually to bring the parties together for a preliminary and informal discussion, in order to acquaint the Arbitrator with the nature of the dispute and the extent of formalities proposed in the hearings. At this meeting the terms of reference to the Arbitrator must be clearly agreed. These terms may be already conveyed in the Submission in such a covering clause as “all matters in difference” above referred to.

Often, however, specific terms of reference are agreed, and this is generally desirable to prevent objections and complications during the progress of the hearings, when one side may wish to bring in a novel issue, leaving the Arbitrator the responsibility of deciding whether this comes within the scope of the arbitration or not. In a formal arbitration it is usual for the appellants' solicitor to formulate definite “Heads of Claim,” which, handed to the solicitor for the respondent, produce “Heads of Defence,” and these documents are handed in to the Arbitrator. In such cases the claim may form a sufficient reference, as it should enumerate the matters in dispute.

In very simple cases possibly the principles themselves, or more usually, their respective surveyors or architects may attend, and it may be that one or two hearings without other advice or witnesses, may be sufficient. More generally the solicitors for either side will attend and it may be left to them to decide which tells the story. Unless further formal hearings are not contemplated no case should be presented at this meeting and discussion should be confined to agreed facts, the

extent of matters agreed to be disputed, and the conduct of the formal hearings. As to the last, the Arbitrator should ascertain whether counsel will appear and get some idea of the number of witnesses (who may be compelled to attend within the United Kingdom) and exhibits, which expression includes documents and letters, so that he may make adequate arrangements for the reception and comfort of those attending. He should encourage, though he cannot control, some equality of entourage on both sides; anyhow, each side should know whether the other intends to brief counsel and the general procedure proposed, after this meeting. The Arbitrator should also call for any undisputed documents, that is documents agreed by both parties as proper for his perusal, such as the contract, specification, drawings, and perhaps some correspondence. He should also ascertain whether a visit to the disputed works—generally essential—is desired, and settle a convenient time and place for both parties for a formal hearing. Let us assume that a “full blown” arbitration is in question with one of the parties out to make trouble. Arrangements made which involve a sufficiently large room with ample writing and table accommodation and waiting place for witnesses, the parties arrange themselves in two camps, and counsel for the appellant (a more suitable term than plaintiff) is asked to open his case. The first difficulty may arise by the respondent's counsel immediately asking for an adjournment, which will be strongly resisted by the other side, who may have witnesses in attendance. Now the Arbitrator has to make up his mind at once whether to grant an adjournment or not, and unless he is convinced that the request is frivolous, he will be wise, even at the cost of much annoyance to the other side, to comply. It may be alleged that certain new facts have been suddenly disclosed, or documents promised not sent by the other side, and until more information is available, it may not be possible to judge the value of these assertions. The Arbitrator in such a case may warn the appealing side that he will mark the costs of such adjournment to them unless he subsequently sees reason to the contrary. This will usually put an end to any frivolous application. If one of the parties fails to appear after being duly summoned, the other side will press for proceeding, but this is very dangerous, and might compromise justice if a valid excuse were afterwards forthcoming. In such an event it is also wise to adjourn and let the defaulting party bear the cost. These difficulties over, counsel for the appellant opens his case, and should be interrupted as little as possible; the Arbitrator should suppress interjections by opposing counsel, whose turn will come, but he may think it necessary to require explanations and to check the proceedings to take special notes of important matters. The opening concluded, counsel will call his witnesses and the Arbitrator should ask whether he wishes them sworn, and be prepared with two or three of the dozen or more forms of oath existing to suit various religious persuasions. The oath is not necessary. In reply to such an interrogation counsel once rejoined to me, “I do not wish it, if the witnesses are going to lie they will lie anyhow.” Not a compliment to this ancient legal solemnity.

It is best to follow the ordinary Court procedure as this materially helps the legal participants. Counsel for the appellants begins by opening his case and when his speech is concluded he calls his first witness and examines him. Counsel for the respondent then cross-examines the witness if he wishes to do so and finally counsel for the appellant may re-examine but only on matters arising out of the cross-examination. Subsequent witnesses called by counsel for the appellant are dealt with in the same manner till all are disposed of. The respondent's counsel then opens his case and calls his witnesses, who may be cross-examined by counsel for the other side and re-examined on the cross-examination as before, when the respondent's counsel may sum up his case. Finally, the appellant's counsel will address the Arbitrator

on the whole case. Now it sometimes happens that the respondent's counsel will ask to reserve his case and call his witnesses first in order to have the last word, the summing up by counsel being the privilege normally of the appellants but in such an event falling to the respondents. The Arbitrator need not and usually should not concede this departure from precedent and generally a polite intimation that he would prefer to hear the learned counsel before his witnesses will in such cases be sufficient intimation that the departure is unwise. The last word said in counsel's final address, the hearings are concluded, but though I have dealt with procedure I have not referred to some matters which occasionally arise for the Arbitrator's decision during the hearings.

First as to evidence :

Objection will often be taken to the form of questions put to witnesses. Their evidence should be confined to things of their own direct knowledge, and leading questions, that is questions which suggest the answer required by the interrogator, should be discouraged and disallowed by the Arbitrator if he is appealed to, particularly in the examination-in-chief.

Secondary, second-hand evidence, either verbal or documentary, should not be accepted unless first-hand evidence is unobtainable, as through the death of an intended witness or his inaccessibility, or the admitted destruction of original documents. An Arbitrator may refuse to accept exhibits or verbal evidence, but he should be very careful in doing so. He should know in general what constitutes evidence, and if in doubt about acceptance he should generally take an exhibit or hear a witness, telling the objecting party that he will form his own judgment as to any value attaching thereto. As to what is evidence it would be rash indeed for a layman to endeavour to give a short definition. Usually copies of letters and often of plans and other documents are accepted as a matter of convenience by both sides after mutual inspection, but if originals are called for by one side they should be produced if this is feasible. Signatures to documents are evidence without proof if 30 years old. Books of account are not evidence, though if produced, they may be used against the side producing them. Generally the counterpart of any document is not evidence in the absence of the document, thus an answer to a letter if objected to cannot be put in without the letter to which it is an answer. Again, certain matters, such as letters from a client to his solicitor, are privileged and cannot be demanded. The strict rules of evidence, however, are not always adhered to in arbitrations and anything approved by both sides may generally be admitted. Attempts are often made to withhold apparently legitimate evidence as being privileged or outside the scope of the reference. This may result in the application by opposing counsel for "discovery," which means that the whole of the documentary evidence available on both sides must be produced and exchanged. An Arbitrator should discourage such a course as involving much expense and the reproduction of a vast amount of useless matter, but if pressed he will be wise to comply, which he does by writing to both sides (to the solicitors): "I hereby make an order for the production of all relevant documents in the case of——and——on the application of Mr. ——" (counsel applying). This, of course, will delay the arbitration considerably, and due time must be given for preparation and clerical reproduction of the material and its inspection by both sides, and it is well to allow the parties to intimate when they are ready for a further hearing.

More difficult is an application by one side to "state a case." This means an appeal over the Arbitrator's head to the High Court, and implies that the applicant either considers that the Arbitrator's view of the terms of reference is wrong or that he is including irrelevant or omitting relevant matters in the hearing, or—and this

is always the ostensible reason—involving himself in a legal decision outside his jurisdiction. An Arbitrator may always state a case, he may do so on his own initiative, he *must* do so if requested on any point of law, but he should never do so on a question of fact. He must himself differentiate between law and fact and may dissect the application if facts appear to be involved, as they often are. Having agreed upon the terms of the case to be stated the solicitor for the party applying will generally undertake the legal formalities of transmission to the High Court, and until the Court's direction is obtained nothing more must be done. The Arbitrator must thereafter comply with the directions of the Court in all matters submitted to it. Stating a case should always be discouraged, the whole object of the Arbitration Act is to rid technical disputes of unnecessary legal formalities, and I have an instance in my own experience where such action obliged me to make an award much more against the applicants for such a case than I should otherwise have deemed fair.

Finally, as regards the hearings, a word as to the Arbitrator's notes. It is highly desirable that full shorthand notes of the whole of the evidence be taken, except in the most informal proceedings, for one never knows when some point may be challenged and reference be required. If either side wishes to make its own shorthand report it should be allowed to do so, and occasionally economy is effected by an arrangement whereby the Arbitrator and both sides have one reporter. Otherwise the Arbitrator should have his own reporter, and the method I have found usually satisfactory and economical is to have complete notes taken, taking at the same time my own jottings as the case proceeds of things which appear to be of special importance. Then after studying my notes I have the full shorthand report read over and only such parts transcribed (often quite a small part of the whole) which appear likely to affect the issue or which are required to clear up any doubtful passages. The shorthand notes, however, are preserved until some time after the award is made and taken up, in case any question should arise requiring further authoritative production of the evidence. To a layman the common practice of the bench of taking voluminous longhand notes while the heavy expenses of both sides are running appears quite incomprehensible.

As already stated it is almost invariably necessary for the Arbitrator to himself visit the work in dispute and thus become acquainted with conditions on the actual site, unless both parties agree that this is valueless.

The Arbitrator may elect to view the work alone or with representatives of both sides present. Usually it is desirable to have someone present on either side unless the matter is very simple and straightforward, because certain work may not be easily identified without help, and often a foreman or other operative can be most useful on such a visit. Occasionally, of course, work may have to be uncovered for examination. Where measuring up is required the services of a surveyor may be essential, and any such appointment should be made independently by the Arbitrator and the costs paid by him and added to the costs of his award. If accompanied, the parties should each be allowed to express their views on items calling for explanation, and the Arbitrator should make such notes as will enable him to consider the opinions expressed afterwards.

THE AWARD.

Having dissected the whole of the evidence, the Arbitrator may proceed to make his award. To begin with, one matter which may occur during the hearings deserves notice. Pressure may be made for an interim award, perhaps on grounds that discussion on certain sharply defined questions is completed and that hardship will result owing to delays in making a complete award. An award must not be made in parts unless

the Submission so directs, and if the Arbitrator draws the Submission he will do well to steer clear of anything in the nature of interim awards, which often complicate questions of costs and are apt to be seized upon by counsel as establishing some precedent obliging a certain course of action in the rest of the proceedings, which may lead to difficulties. Naturally, if he has had to state a case upon part of the dispute his award may fall into separate parts, but it would require more knowledge of law than most laymen possess to successfully publish an award on part of an issue while the remainder was *sub judice*, even if the Submission allows this. If he likes, the Arbitrator may state his award or part of it in the form of a special case for the Court. For example, he may award certain things to one party if the Court takes certain legal views; generally, however, the method already referred to of asking the Court's view before making an award, if reference to the Court is requisite, is preferable.

An award must be made in three months from the time of entering on the reference, or before the expiry of this period the Arbitrator must write to both sides saying, "I hereby enlarge the time for making my award to —" —any date he likes, and this process may be repeated. Should the time inadvertently run out with such notice the period ought to be enlarged by an application to the Court, but the error may be condoned by both parties. It is seldom that a fair award can be reached by regarding the whole issue together. Each item of claim and defence should be separately adjudicated upon privately, and these issues then be summed up with proper regard to their varying magnitudes, so that the party succeeding shall be clearly evident.

An award must specifically find and direct, and it is not enough to propose or "be of opinion that." Further, a time should be fixed for the execution of the directions given, which might otherwise be indefinitely delayed.

There is a great temptation, anyhow, to one interested in this subject, to state in his award the reasons for the decisions arrived at, but nothing should be more discouraged, the actual findings should be as brief and concise as possible, for an award should be a judgment not an argument, and, as has been pointed out from the bench, though the conclusions may be right the reasoning may be wrong.

On the other hand, an ample recitation is most desirable. This is a historical statement to show that the Arbitrator's appointment is in order, and that he has conscientiously carried out all his duties, and will do much to prevent an award being upset. Thus the Arbitrator must state things well known to everyone but required to be recorded. For instance, that he has entered on the reference, examined the witnesses, viewed the work, enlarged the time for making his award, taken notice of objections raised by either side, and so on.

As to costs, the submission may give directions, but if not the Arbitration Act provides that these are to be dealt with in the award. Costs are sometimes much more important than the issue and counsel will often press that they shall follow the award, but the Arbitrator should never give any pledge to this effect, for a technical loss of the case may by no means always justify imposing all costs on the losing party. If a case is referred from the Court the costs to the time of reference, *i.e.*, the cause costs, may or may not be in the Arbitrator's jurisdiction. This he must ascertain from the Court.

The award may fix actual costs as sums of money or proportions of costs to be paid by each side, leaving the parties' solicitors to adjust these, but before proportioning these costs some idea of their amount should be clear in the Arbitrator's mind, and he may require legal advice on the subject. The Arbitrator's fees and expenses, *i.e.*, the cost of the award, should be included as part of the award which precludes this item from being taxed, but the amount should not be stated in the

award, but in a letter to both sides stating that the award may be taken up on payment of such costs, and as eventual payment is directed in the award, it does not matter which side pays for the award initially. The award must be stamped, and this is usually effected by the Arbitrator, who often sends a duplicate, unstamped, to the other party, merely as a copy after the original has been taken up.

Finally, the novice in this most interesting phase of the varied work which falls to the lot of an Architect will be well advised to cultivate a judicial frame of mind and to remember that the greatest pains to insure impartiality and attention to matters, often seemingly small, is essential for the successful conduct of an arbitration. He is entitled to seek legal assistance, and in the preparation of his award and other matters he will find such assistance of great value, more particularly until his experience matures.

Rea on Present Day Estimating.

A vast amount of food for thought is contained in the two tables which Major J. T. Rea has prepared for the supplement to the new edition of his book.* The latter has been reprinted from the last pre-war edition; but in the supplement the author presents us with the most recent information on price changes, and, in the case of Building Wages, corrects his figures to allow for a decrease in output and efficiency.

From the Prices of Materials a great many lessons may be learnt. It is not without surprise that one finds red-facing bricks to have risen only by 37 per cent. between July 1914 and February 1922, as against the 175 per cent. of pressed blue bricks. Flettons come somewhere about half-way between these two, with 91 per cent. increase; the price of white glazed stretchers has exactly been doubled.

So has Portland cement. But whereas ground blue lias lime has gone up 140 per cent., there is an increase of more than double that figure for the cheaper kinds.

The jumps in the timber prices are rather less than one would suppose. Teak is found to have risen only by 65 per cent., $\frac{3}{4}$ inch matchboarding by as little as 40 per cent. But it is when one comes to cast iron that the prices take wings; for while rolled steel joists have gone up a mere 87 per cent., 5 inch cast-iron eaves-gutters have gone up 350 per cent. Modest zinc! thou never wast a profiteer; who would remonstrate with thee for such a negligible matter as a 14 per cent. rise? A well-deserved one indeed.

Glass hovers between 112 and 122 per cent.; the lighter kinds have increased more, the heavier less. From the glass one steps over into the wages table; and it is here that Major Rea has shewn his real strength. He does not present one with a bare list of the actual prices; no, he adds 25 per cent. for decreased output. Of this amount 20 per cent. is ascribed to the actual lowering of efficiency, the remaining 5 per cent. to the substitution of a 44 hour for a 47 hour week.

Of course we know very well who tops the list. The French polisher, who was reputed to earn fabulous sums during the years of war, shews a net increase of 189 per cent., and a total one of 261 per cent. Fortunately the bricklayer, mason, slater, tiler, carpenter and joiner keep well in the rear of that adventurous gentleman with 109 per cent. nett for each, or 161 per cent. total (equivalent to a present rate per hour of 2s.). But this figure demands some modification, since a labourer is required in each case, who will not be satisfied with less than 138 per cent. nett, or 198 per cent. total. But this should, perhaps, not be grudged him; for the poor fellow only earned 8d. an hour in 1914. And how long is it since the painter was (to all appearances) quite happy with 4 $\frac{1}{2}$ d.?

*How to estimate. By J. T. Rea, 4th edition revised and enlarged. London: B. T. Batsford, 1922

Professional Fees.

The Graduation of Percentage.

As we are sometimes asked for an interpretation of the graduated scale referred to in Clause 1 (b) of the Scale of Professional Charges, we invite the attention of members to the following extract from an article by Mr. H. V. Milnes Emerson, A.R.I.B.A., on Professional Fees, published in the *Architects' Journal* of April 26th, 1922.

Clause 1 deals with the fees chargeable on new works, and sets forth the various services that the architect might be called upon to perform in relation to these fees. Paragraph (b) appears to cause a certain amount of perturbation among architects as to how the percentage should be graded. In practice, taking ordinary domestic work as a basis, an architect would be quite justified in using the normal grading of the scale for works costing under £2,000. The scale works out at '211 per cent. added to the six per cent. for every £100 or part of £100 below the £2,000 limit. Taking a house costing, say, £1,000, the normal scale would be 8'11 per cent. which appears a reasonable fee for this class of work. If, however, a factory building was designed instead, of quite a plain character, it is obvious that a lower percentage than 8'11 per cent. would be reasonable; whilst in a building costing £1,000, and involving a large amount of intricate detail, the remuneration at 8'11 per cent. would prove inadequate. It will be seen, therefore, that the application of this scale does not necessarily mean a normal graduation, but a graduation within the 10 per cent. and 6 per cent., which the architect considers would be reasonable remuneration for his services.

For the reader's benefit, the normal graduated scale would be as follows:—

Cost of Works.	Fees per cent.	Cost of Works.	Fees per cent.
£100 or under ...	10'00	£1,100 or under ...	7'90
200 " ...	9'79	1,200 " ...	7'68
300 " ...	9'58	1,300 " ...	7'47
400 " ...	9'37	1,400 " ...	7'26
500 " ...	9'16	1,500 " ...	7'05
600 " ...	8'95	1,600 " ...	6'84
700 " ...	8'74	1,700 " ...	6'63
800 " ...	8'53	1,800 " ...	6'42
900 " ...	8'32	1,900 " ...	6'21
1,000 " ...	8'11	2,000 " ...	6'00

Public Lectures on Architecture.

A series of five public lectures on Architecture will be given at the Galleries of the Royal Institute of British Architects, 9, Conduit Street, W. 1, on the following dates at 5 p.m.:—

Thursday, June 8th, Mr. D. S. MACCOLL, M.A., LL.D. (Keeper of the Wallace Collection). "What is Architectural Design?"

Thursday, June 15, Professor C. H. REILLY, M.A. (Roscoe Professor of Architecture, University of Liverpool). "Some London Streets and their Recent Buildings."

Wednesday, June 21st, Mr. W. H. BIDLAKE, M.A. (Cantab). "The Continuity of English Architecture."

Unification.

The following statement on Unification in the architectural profession is issued by the Committee on Unification and Registration.

Unification means a grouping into an organic whole within The Royal Institute of British Architects, of (a) the entire (professional) member-roll of The Society of Architects which will cease to exist as a separate body; (b) the entire (professional) member-roll of the Architectural Association and of the Allied Societies of the Royal Institute (each Society maintaining its name and entity); (c) architects, properly so-called, under proper conditions of qualification, who are at present unattached to professional Societies.—(Until Unification has statutory force, in the form of Registration, the inclusion of these unattached architects will necessarily be dependent on the option of these architects themselves, who it may be premised will not decline the advantages which inclusion will obviously offer.)

Details of the status in the R.I.B.A. to which the present grades of membership in The Society of Architects would be admitted, though not yet precisely defined, are already provisionally outlined to the satisfaction of representatives of the Councils of both bodies. The admission of unattached architects, while conferring on them such a status as will offer them most valuable advantages, will not derogate from the prestige and interest of those existing members whose membership of the R.I.B.A. is based on qualification by examination or other tests.

The advocates of constructive Unification never lose sight for a moment of the relation of this movement to Registration. They regard Unification as a preliminary step without which Registration is a mere vision and as a stage in the evolution of Registration which will add incalculable value and force to Registration when finally the latter is obtained. In other words, Unification has a double value. It is an end in itself—actually within grasp and well worth attainment even if Registration be remote. And, besides this, it is a means, and an essential means, to Registration.

Unification may reasonably be looked on as the method whereby *every worthy and bona-fide Architect in the United Kingdom* :

1. Can actually and actively co-operate with his professional *confrères* in the advancement of ARCHITECTURE by a direct interest in the R.I.B.A., and thereby assist the laudable objects for which the R.I.B.A. was founded.
2. Can have a direct voice and share in the education, management and control of the PROFESSION.
3. Can contribute to and share in the advantages to be gained from a profession united in, represented and led by a single Body of properly constituted authority and unquestionable pre-eminence, such advantages including, *inter alia*, improved prospects of obtaining Statutory Registration.

UNIFICATION DOES NOT INVOLVE

The inclusion within the ranks of the R.I.B.A. of *any person engaged in any other vocation than that of an Architect or Architect and Surveyor.*

UNIFICATION IS DESIRABLE :

1. *Because* the Institute so constituted would become numerically larger than any existing bodies and thereby proportionately more influential, thus enabling the practical removal of many of the now prevalent abuses and anomalies of practice, by the more extended application of the Charter, Bye-laws, Regulations and Edicts of the R.I.B.A., and in particular of its Code of Professional Practice and of its Scale of Professional Charges.
2. *Because* the R.I.B.A. would be strengthened by the direct interests and opinions of those trained outside, with whom it is at present only remotely in touch.

3. *Because* it will put the reformed R.I.B.A. in a position to speak indisputably and conclusively for the profession as a *whole*, which legal advice has indicated as an essential position to secure the concurrence of Parliament to the terms of any Registration Bill promoted by the R.I.B.A.
4. *Because* it will enable the R.I.B.A. the better to carry out the objects for which it was founded; and the work which it has initiated and is fostering for the improved professional position of Architects by the wider field wherein its activities can be employed, and will thus materially strengthen the power of the R.I.B.A., enhance the value of its work and raise its prestige.
5. *Because* it will provide facilities for—
 - (a) The provision of an organisation whereby speedy and effective action can be taken on all matters of professional interest and importance.
 - (b) The expression of the decision and opinion of the whole profession in agreement or difference with the Government and its Departments, County Councils and all other Public Authorities, Companies and Bodies.
 - (c) The support, protection and defence of the professional interests of Architects and the establishment and maintenance of proper etiquette within the profession.
 - (d) The promotion of systematic architectural education and the Statutory Registration of Architects.
 - (e) The maintenance of proper relations with other organisations in all matters relating to building.
 - (f) The education of the public to an appreciation of Architecture by press publicity and other means.
 - (g) The undertaking of all other lawful Acts required to carry out the foregoing objects.

By rejection of Unification, Architects would be reconciling themselves to an indefinite continuance of the present-day conditions and fratricidal polemics of the last generation, by which opportunities for improving the Architect's lot have had to be ignored or have been lost, and the cause of Architecture has suffered accordingly.

IT IS OBVIOUSLY OF VAST IMPORTANCE TO THE ENTIRE PROFESSION THAT WHEN REGISTRATION IS AT LAST ACHIEVED, IT SHALL FIND THE ARCHITECTURAL PROFESSION IN A STATE OF ORGANISED UNITY.

Any Policy advocating Registration without prior Unification :

1. Might deprive the profession of the advantages to be gained by Unification.
2. Does not assure that the R.I.B.A. will remain the authority controlling the profession.
3. Makes it certain that the R.I.B.A. will either be :

- (a) Relegated to an inferior and subordinate position, or,
- (b) Subjected by Parliament to an overhaul of its constitution and Charter rights, when it will have necessarily but little say as to the manner in which outside Architects are to be admitted to it.

PAUL WATERHOUSE, President of the Royal Institute of British Architects, *Chairman*.

EDWIN J. SADGROVE, President of The Society of Architects, *Vice-Chairman*.

ARTHUR KEEN, Hon. Secretary, R.I.B.A., *Hon. Secretary*.

May 1st, 1922.

In the course of the discussion on the foregoing document, Mr. E. J. Sadgrove, the President of the Society and now Vice-Chairman of the Unification Committee, speaking as a member of the drafting Sub-Committee, said that in his opinion to include all the arguments in favour of Unification in the document would mean that it would be of such a length as to preclude its receiving that attention which a concise statement such as that proposed would attract, and if sent out as it stood it would have more effect than personal letters in the professional journals. The essential point was "This is Unification, will you have it?"

Mr. C. McArthur Butler, Secretary of the Society, agreed that it was desirable that some statement should be issued without loss of time, but he thought, in view of the differences of opinion expressed at the meeting on points of detail, that it would be better to refer the document back to the Sub-Committee with instructions to produce a document which should represent the considered views of a majority of the main Committee. He for one must not be taken as agreeing in all respects with the document as drafted.

Mr. John E. Yerbury took strong exception to the document being issued in its present form, as in his view, it required revision in practically every paragraph. After a lot of time had been wasted on points of order and procedure, the document was considered in detail, and after a long, and at times somewhat heated discussion, it finally emerged in the form as now printed, that is to say, practically as drafted.

Mr. Sydney Perks, the prime mover in the so-called R.I.B.A. Defence League, was in excellent form and alone voted against the statement as a whole, intimating that he would issue a minority report.

MINORITY REPORT.

The following is an expression of the view of a minority of Members of the Unification and Registration Committee on the statement on Unification issued by that Committee:—

We are strongly in favour of Unification but submit that the scheme suggested by the majority of members of the Committee is not one that is likely to obtain it. Fundamentally it is entirely an optional scheme, under which men outside the Institute are to be allowed to join without passing any examination, and subject only to the approval of our Council, to a joint Committee of the R.I.B.A. and the Society of Architects, or to some other tribunal to be appointed. But, as under the scheme, there must be Architects who are either rejected or who do not desire to join the Institute, there can be no Unification of the profession, and it is obvious that the only way to obtain it is by a Registration Act giving legal power for its enforcement.

It was urged at the last meeting that the Associate Members of the R.I.B.A. strongly resent any admittance to their class without examination. However, as the Unification Committee, although asked to do so, would not insert in their statement a clause relative to any test, it will be possible, under their proposals, for an indefinite number of men to become Associates of the Royal Institute of British Architects without passing any examination. This wilful omission of a saving clause clearly indicates that the majority of the Committee is in favour of admitting unexamined men to that class, although the proposal is entirely contrary to the views expressed by many of our Associate Members. We trust Associates will strongly oppose the scheme, not only on that account, but for other reasons mentioned in this Report.

There are over 2,000 men in the Allied Societies who are not members of the R.I.B.A., and it is absurd to suggest that they should be admitted to the Institute with a view to the Unification of the profession, for, at the present time, these Societies elect representatives to the Council of the R.I.B.A.

Unattached Architects are bound to exist, and apart from them, the Institute can now claim to represent every Architectural Society in England, except The Society of Architects. As, however, this Society was founded, primarily, with the view of obtaining Registration, it could not consistently oppose the principle of any Registration Bill, and, although it might object to details, doubtless agreement would ultimately be brought about. Consequently, we submit that, apart from unattached Architects, a united profession could at once approach Parliament with a view to obtaining Registration. We fail to see why Members of The Society of Architects and our Allied Societies should be allowed to enter the Institute without passing the statutory examinations. The Architectural Association is practically allied to the Institute, and the Official Architects' Association is desirous of working with the Institute in every way. For these and other reasons we consider that the Committee's scheme of Unification is absolutely unnecessary, and we also regard the proposal to throw open the coveted membership of the Institute to all and sundry without the test of a professional examination, is fraught with great danger to the future welfare of the R.I.B.A. During the final deliberations of the Committee efforts were made—but unfortunately without avail—to elicit a plain statement of the intentions implied by the term "grouping into an organic whole within the Royal Institute of British Architects" of Architects "properly so called." In our view it is deplorable that a policy expressed so ambiguously should be promulgated.

It will be seen at once that acceptance of the Committee's policy involves an entire change in the character of the R.I.B.A. as now constituted, and Members are reminded that the present value of the Royal Institute to Architects results from its having stood, from the time of its foundation, for what is best in Architecture, and that it has appealed to and gained the adherence of its Members precisely for the reason that it has required and maintained a high standard of architectural qualification from those connected with it. But for this, it is obvious that the worthy men within its ranks who have brought credit to Architecture and developed a high standard of professional ethics would not have entered its portals. We are now asked, under the Unification policy proposed by the Committee, to go back on these conditions and to accept the principle of admitting men into the Institute on a footing never before contemplated, and in a manner that, as it appears to us, must inevitably result in changing materially the whole standard of value upon which, hitherto, the Royal Institute has been judged.

Apart from rare exceptions, made in the case of Architects of distinction, membership of the R.I.B.A. is now only obtainable by those who can satisfy the increasingly high standard of qualification required by the Examination Board. But under the Committee's proposals these salutary restrictions must, obviously, be set aside, as it is clear that students will not work for and undergo difficult and costly examinations when they realise that others may be admitted by means that demand little or no sacrifice.

In the terms of the document to which we refer, Unification is said to be desirable, *inter alia*, because the "Institute, so constituted, would become numerically larger than any existing bodies, and thereby proportionately more influential." We consider this principle to be entirely false, as that which makes a learned body influential, and causes it to command public respect, is *not* the number of its members, but the *nature of the qualifications required for its membership*.

Again, whilst, as set forth in the statement, it is no doubt quite true that some of the now unattached Architects and others "will not decline the advantages which inclusion (in the Institute) will obviously offer," it is in our opinion, outrageous to claim that such admissions "will not derogate from the prestige and interest of those

existing Members whose membership of the R.I.B.A. is based on qualification by examination or other test."

Moreover, the Institute, regarding its representation of architecture and its control of Architects in this country, is already, many times over, numerically larger than any other architectural Society as at present constituted, and the recognition given to the value of its membership, is adding to its numbers at an increasingly rapid rate. There is, in fact, every reason to suppose that if the present basis of the Institute is consistently preserved it will represent, before long, all that need be seriously considered in matters architectural. It is because we think this and moreover because we consider that the great body of the Institute Members will adopt the same view when they realise the vital importance of the principle now imperilled, that we express our most emphatic disagreement with the sequence under which the "Unification" policy, so-called, is to be carried out. To suggest that "Unification," which involves combination with Architects who do not, necessarily, hold similar views either upon architecture or ethics with those now adopted by the Institute would assist Registration is, in our opinion, another entirely incorrect assumption. We see no reason whatever why the Institute should not proceed at once with the promotion of a Bill for the statutory registration of Architects, and thereby ascertain, in a practical way, whether Registration is, in fact, obtainable.

As the only body of Architects existing in this country that has the slightest chance of promoting a Registration Bill with any success, it is difficult to understand why the Institute, representing as it does, with comparatively few exceptions, all the reputable Architects of the country, should hesitate to adopt a policy for the benefit of the whole profession which it, and it alone, has any chance of carrying through with success.

Finally, without absorbing time in the useless discussion of details attached to a principle we believe to be entirely wrong, and altogether disastrous to the future success of the R.I.B.A., we beg to record our emphatic disagreement with the Unification Committee's proposals, and we hereby recommend as an alternative policy that steps be taken forthwith by the Institute to promote a Bill for the Statutory Registration of Architects, and in the meantime to preserve its membership on the present basis.

Incidentally we recommend also that measures be adopted to secure for the Associate Members of the R.I.B.A. the full voting powers, hitherto enjoyed solely by the Fellows, and thus enable our younger members to participate in the affairs of the Institute to an extent to which they are entitled.

Mr. C. B. Flockton of Sheffield has written to the Unification and Registration Committee to express his disagreement with its statement on Unification, but as he was unable to be present at the last meeting we have not asked him to sign this minority Report. ALFRED W. S. CROSS, Vice-President, R.I.B.A.; SYDNEY PERKS, W. E. RILEY, DIGBY SOLOMON, Members of the Unification and Registration Committee.

Professional Defence in New Zealand.

I think that the time has arrived for the institution of a Professional Defence Fund, not to encourage litigation, but to assist in defending members in cases where questions of professional principle are involved. There is an excellent set of regulations governing such a fund to be seen in The Society of Architects' Year Book. I would like to see a start made in the formation of such a fund at once.—C. R. FORD, F.S.ARC., P.N.Z.I.A.

Professional Problems.

Mr. J. J. ROBINSON, M.S.A., the President of the A.A. Ireland, in the course of a vigorous and valedictory address to that body on April 25th last, suggested the formation of a National Irish School of Architecture. He urged that a triumvirate young and enthusiastic architect invested with plenary powers, should supplant those terrible twins, Caution and Prejudice, and find a solution of the problem.

We agree with Mr. Robinson that large Committees move slowly and generally die of inanition owing to the lack of individual responsibility. That, in our opinion, is the crux of the whole situation, and we would go further than Mr. Robinson and urge that architectural problems of any magnitude, such as education, unification, registration, competitions, charges, defence, etc., etc., should be grouped, and each group handed over to one man, who would have only one job, viz., to elucidate and solve the problems allocated to him, subject to the control of the Council.

Take any professional problem, say Unification for example. In the hands of a capable individual with no other object in life than the completion of one task at a time, Unification would by now either have been accomplished or scrapped, and the greater part of the voluntary services of some sixty or seventy persons might have been conserved if not entirely dispensed with. The same observations apply to the tackling of any problem whose scope is beyond that of the domestic affairs of a professional body. It is largely a question of finance, and in our view the payment of reasonable and adequate fees for services rendered would be justified by result, and is indeed the only way in which to secure the accomplishment of reforms within that reasonable time which is the essence of the contract if anything is to be accomplished.

Correspondence.

TO THE EDITOR OF THE S.A. JOURNAL.

THE MODERN OUTLOOK.

SIR,—Mr. Bartle Cox's reasoned plea for this, in the recent issue of the *Journal*, is interesting, but much that he says is founded upon the fallacious idea that Registration would protect architects and militate against architectural education. For close upon forty years, however, I have advocated it upon directly contrary grounds. In my opinion—and I hope in his also when he considers the matter more carefully and the detailed provisions of any well drawn Registration Bill—it would protect the public against the possibility of employing untrained and unqualified architects by insisting upon thorough architectural education before aspirants were permitted to practise, and nothing more greatly encouraging to high training could well be devised. It would not insist upon the training being acquired in any particular way, or at least it should not do so, for cast-iron rules are both abhorrent to our national character and likely to restrict development; but the result of a high standard of professional, artistic and constructional qualification would be achieved universally, as it already has been in marked degree by the Associates of the Institute since their examination was first made compulsory in 1882, when I sat and passed on a much lower degree of competency than would achieve that result now.

I am, Yours faithfully,
G. A. T. MIDDLETON.

Chalk Houses.*

In the November Journal we printed a brief summary by Mr. T. Gerrard Davidson, F.S.A.R.C. of his experiment in building a cottage at Whiteleaf, Bucks., in chalk concrete and in the April issue of "The World's Work" there appears an article on "Chalk Houses" written rather from the popular than from the technical standpoint, but which gives some further interesting statistics relating to this new departure in walling for cottages.

In the Whiteleaf cottage, says the Miss Crozier, lengths of galvanised iron wire running the whole length of the walls are substituted for straw as a binding material incorporated in the crushed chalk set in Portland cement, which is rammed into its position in the wall with the help of an ingenious and simple patent plant, consisting of a revolving double shuttering which climbs up the wall as each course is completed, and which interlocks itself to assure true horizontal and vertical elevations.

With this appliance no transverse bars are used, so that there is nothing to withdraw and fracture the wall before it has set hard.

The sides of the shutters revolve on iron rods, on which the transverse galvanised iron wires are threaded, and when the rods are withdrawn from the shutters the wires are automatically released without cutting. This assures a uniform thickness of wall.

To start to build a wall, the shuttering having been placed in position, the chalk conglomerate, mixed as above, is thrown into the shuttering against the sides, to form a rough outer thickness, or "crust," of about six inches width. The interior space—12 to 6 inches—is next filled in with rather larger chalk (used dry), and the whole contents of shuttering rammed solid.

In ramming a special rammer is employed, which presses the chalk *outwards*, as well as *downwards*, and this causes the dry inner material to blend into, and amalgamate itself with, the lining "*conglomerate*," which is caused by the ramming to become irregular in thickness, assuming a waved formation on the inner surface, varying from 4 to 8 inches wide, which greatly adds to its strength.

Three hours after completion the course is sufficiently set for the shuttering to be revolved upwards, for another course to be laid. Twenty-four hours later the completed work has set hard, and the atmosphere continues to harden the surface until it becomes as hard as flint or granite.

When this method of walling is rightly used *no interior plastering is needed*, the walls of the rooms being whitewashed or colour-washed to suit the owners fancy, while for an outside finish a coat of mineral oil (or other oil drying with a hard skin) may be applied, sanded, and waterproof-whitewashed.

The necessary concrete site-covering and drain-bed can be successfully made in exactly the same manner as walling.

With regard to labour—"chalk building" is *a new trade*, and for his house at Whiteleaf, Mr. Gerrard Davidson employed as foreman an ex-missionary, with experience of "cob" building out in British Carpentry, while the actual walling was mixed and rammed by intelligent but unskilled labour provided by several ex-soldiers, at the time without a trade; skilled workmen being employed for the necessary carpentry and plumbing required in dealing with the roof, flooring and pipes.

This spring Mr. Gerrard Davidson—himself an ex-officer—hopes to be able to take on and train a number of intelligent, able-bodied ex-Servicemen who at present have no skilled trade at their command, starting them as learners, the most successful workers later on becoming skilled men and foremen.

The ordinarily intelligent man of the artisan class can, as a rule, learn to carry on the work of chalk conglomerate wall-building after half a day's demonstration and

* From an article in the "World's Work," of April, 1922, by Gladys Beattie Crozier.

practice.

Chalk is technically regarded as a summer method of building, but can usually be carried on for about nine months in the year. The number of men employed to build a small house may range from two to six or eight, in addition to the foreman.

Five feet deep is probably the limit to which it is worth while to dig in order to build with chalk, and though the method is particularly suited to a chalk district where the chalk can be procured at a shallow depth directly on the site, it may still offer an economic advantage to employ it within a few miles of a chalk quarry or hill.

Chalk conglomerate walling can be equally well employed for the construction of a small garage, stable, out-house or chicken-house.

Mr. Gerrard Davidson's cottage at Whiteleaf differs from all other experimental chalk houses such as those built by the Government at Amesbury, in that he has used a much higher proportion of cement, which is hydrated in a solution of silicate, and by that means made harder and waterproof.

The Educational Value of Art.

Professor J. H. Hofmeyr in opening the third annual exhibition of the South African Academy in the Selborne Hall, Johannesburg, laid stress on the great educational value of art in the life of the community, says the "Rand Daily Mail."

Art, he said, had an essential function to discharge. For children growing up in beautiful surroundings must learn to appreciate beautiful things, and must thus gradually fashion their lives in accordance with the highest ideals. The speaker pointed out that in the older university the cult of art was somewhat neglected, but that in the newer universities, and certainly in the newest of all, the University of the Witwatersrand, the arts had not been neglected. A chair of music has been established, and a chair of architecture, while a beginning had been made in painting.

The Moderns had a great deal to learn from the Greeks in the matter of art. With the Greeks the arts were all to a large extent interdependent, and the modern tendency for artists to work in watertight compartments, for the painter to work alone, and the musician, and the sculptor, and the architect, were unknown to the artists in those far-off times. Each learned from the other, and the principles which guided the one were adopted as far as possible by the others. Something of this spirit, proceeded Professor Hofmeyr, was observable in the attitude of the Association of Transvaal Architects, which had arranged that exhibition. Not only was it open to painters, but specimens of the work of architects and craftsmen were on exhibit, so that each might profit by the productions of the other.

Professor Hofmeyr pointed out that the exhibition owed its existence to the public spiritedness and initiative of the members of the Association of Transvaal Architects. The last two exhibitions, he said, had been run at a loss, but those losses had been made good by the architects, who were, perhaps, not as well favoured in this world's goods as some of their professional brethren. He felt that no other professional body in Johannesburg had displayed a public spirit equal to that evidenced by the Association of Transvaal Architects.

He was not sure that it was the function of the University to establish an art school, but he felt that the University could lay the foundations on which others could build; in which connection he added that the responsibility for propagating art lay with the municipal authorities, as well as the educational authorities, for art, he held, was a subject of vital importance in the life of the nation.

Notes of Recent Cases.

By W. VALENTINE BALL, O.B.E., BARRISTER-AT-LAW.

Arbitration—Failure to appoint Arbitrator within agreed time—Whether agreement providing that Arbitrator must be appointed within a limited time is invalid. Atlantic Shipping Co. v. Dreyfus (1922), 38 T.L.R. 534.

This case raised a point which is of interest to those who are bound by agreements containing clauses referring disputes to arbitration. The agreement in question in the action provided that "Any claim must be made in writing and claimant's arbitrator appointed within three months of final discharge, and where this provision is not complied with, the claim shall be deemed to be waived and absolutely barred." It was contended that this clause is illegal inasmuch as it ousted the jurisdiction of the Courts. Lord Dunedin, in giving judgment in the House of Lords, after pointing out that it has long been decided that a mere agreement to refer a matter to arbitration was not illegal as ousting the jurisdiction of the Courts, said there was nothing illegal in putting a time limit on the appointment of an arbitrator. He said, "All it comes to is this: I stipulate that you shall settle your differences with me by arbitration and not by action at law, and I stipulate that you shall settle your differences and start your arbitration within a certain time or you shall be held to have waived your claim." It is useful to have this point determined, because in view of the delay which sometimes takes place in the appointment of an arbitrator it might be as well to insert a clause similar to that the validity of which has been settled by the House of Lords.

Housing—Land for Houses—Acquirement by Local Authority—Compulsory Purchase. Connon v. London County Council (1922), 22 T.L.R. 380. (Peterson, J.)

When a local authority proposes to acquire land as a site for the erection of houses for the working classes under s. 12 of the Housing and Town Planning Act, 1919, it has power to purchase compulsorily any house on such land, including a public house, provided that the Ministry of Health is of opinion that the house would serve a beneficial purpose within s. 11 of the Housing of the Working Classes Act, 1908. It is of no importance for the purposes of the Act that the house and its site which it is proposed to take are not required for use as a workman's dwelling or as a site for such a dwelling or for a roadway or for other purposes of the Acts. The power is given as incidental to the complete control of the development of the building scheme.

Landlord and Tenant—Covenant by Landlord to Repair—Breach and resulting damages—No notice of Want of Repair. Murphy and Os. v. Hurly (1922), 38 T.L.R. 386. (In the House of Lords.)

It is a well recognised rule of law that where a landlord is under covenant to repair, the tenant must give notice of want of repair before he can hold the landlord responsible for a breach of covenant. The common sense of this rule is obvious, where repairs may be required to be done to property of which the tenant is in possession and to which the landlord has no access in the ordinary way. In the above case, however, the rule was departed from. The landlord was under contract to keep a sea wall in repair. It was shown that the sea wall, which abutted upon a number of other holdings besides that of the plaintiff, was over three miles long and that the landlord and his agent had just as good an opportunity as the plaintiff had of seeing whether the wall was damaged by the sea. Damage having been proved, the landlord, even in the absence of express notice of want of repair, was held liable to make it good.

Public Authorities Protection—Water Board—Statutory Duty—Conveyance of Pipes by Motor Lorry—Accident while Lorry returning Empty—Action brought more than six months after date of accident—Whether brought in time—Public Authorities Protection Act, 1893. Edwards v. Metropolitan Water Board (1922), 38 T.L.R. 153. (In the Court of Appeal.)

Those who engage in litigation with local authorities are sometimes forcibly reminded of the fact that an action for breach of duty against such a body must be brought within six months. Otherwise it is barred. The act or default complained of must, however, be something done or omitted "in pursuance or execution or intended execution of" a statutory duty; and a variety of cases have occurred in which the meaning of these words has been considered. The most recent is that above mentioned. The Metropolitan Water Board used a motor lorry for transporting water pipes and other stores. The maintenance and repair of their system was a necessary part of their statutory obligations. Whilst the lorry was on a return journey—empty—it knocked down and injured the plaintiff who delayed bringing an action until more than six months had elapsed. It was held that the action failed.

The Architectural Scholarship, 1922.

VALUE £15. OFFERED FOR MEASURED DRAWINGS.

The Scholarship is awarded for Measured Drawings, and the Competition is open to Licentiates and Students of the Society.

Candidates are required to submit at least three and not more than four sheets of measured drawings and details of some building of historic interest.

The drawings must be prepared between January and September, 1922, and are to be executed on imperial size paper, and delivered carriage paid at the Society's Offices, 28, Bedford Square, London, W.C.1, on or before September 30th, 1922 together with the original sketches and notes.

The drawings must be without name, motto, or other mark of identification, and must have attached thereto a plain sealed envelope containing the Competitor's name and address and a signed and attested declaration that the drawings are the Candidate's unaided work.

The drawings will be numbered as received, and a corresponding number placed on the envelope, which will not be opened until after the award has been made by the Assessors and confirmed by the Council.

The Scholarship is of the value of £15, and will be disbursed by the Council on behalf of the holder.

The award will be made by the Council subject to their approval of the manner in which the Candidate proposes to utilise the Scholarship, or alternatively, to the Candidate agreeing to such a scheme as the Council may decide upon.

Should the scheme not call for the payment of so much as £15, the holder may receive the value of the balance in books or instruments.

The Council will not be responsible for any loss or damage that may occur to any drawing or document submitted in connection with this Competition, nor for any delay in delivery.

The Council reserve the right to exhibit and/or reproduce the drawings, and their decision on any matter arising is to be final.

The Scholarship may only be held once by the same person.

A Candidate who does not adhere to the conditions in every particular, will be disqualified.

Notes from the Minutes, May 11th, 1922.

BUILDING CODE.—The Society's representatives on the Joint Committee reported that Mr. A. ALBAN H. SCOTT, a past Vice-President S.A. had been co-opted a member of the Joint Committee, and that it had been decided to recommend the R.I.B.A. to approach the Ministry of Health with a view of obtaining an extension of the period granted for the relaxation of Building By-laws due to expire in July 1922.

PUBLIC COMPETITIONS.—The Society's representatives on the Joint Sub-Committee reported that the conditions of the Newport (Mon.) War Memorial Competition had been adjusted to the satisfaction of the Committee and that the ban imposed by the Institute and the Society had been removed.

HOUSING FEES.—The attention of the Council was drawn to the statement in the R.I.B.A. report that negotiations had been reopened by the Institute with the Ministry of Health on this subject.

LIBRARY.—The report of the Art and Literature Committee shewed that the demands on the Society's Circulating loan library were increasing and that a number of new books had been acquired by donation and purchase. A scheme is under consideration for a considerable extension of the loan library facilities for the benefit of country members and for additions to the collection of books of reference.

PREMIUMS FOR PAPERS.—The Council has allocated three premiums of ten guineas each to be at the disposal of the Art and Literature Committee under certain conditions during any one year in remunerating any writers commissioned by the Council to prepare articles on subjects of professional interest for the use of the Society.

THE SOCIETY'S COMPETITIONS.—The Assessors' award of £10 10s. to the author of the design No. 1 in the Travelling Studentship Competition was confirmed. On opening the sealed envelope the author was found to be HAROLD ANDERSON (Student) of Blean, Canterbury. A scheme is under consideration for enabling overseas competitors to take part in the half yearly design Competitions.

COUNCIL MEMBERSHIP.—Ill-health and other emergencies having prevented Messrs. HENRY TANNER and F. HALL-JONES, Members of Council, from attending the meetings during the present session, they have tendered their resignations of the office, which have been accepted with regret.

BUILDING TRADES PARLIAMENT.—The Council has given notice of its intention to withdraw from representation on the Industrial Council of the Building Industry as from June 30th, 1922.

ARCHITECTS AND THE ROYAL ENGINEERS.—The Society has accepted an invitation from the Council of the R.I.B.A. to send a representative to the Committee formed to organise a presentation to the Headquarters Mess from temporary R.E. officers now returned to civil life. Mr. G. BLAIR IMRIE (late Major R.E.) will represent the Society.

REGISTRATION IN SOUTH AFRICA.—A report from the Society's Branch at Johannesburg shews that the Branch is contributing its quota from its own resources to the funds of the Union Registration Bill Committee, and is holding in reserve the fifty guineas donated by the Home Council for use in any further call upon the

finances of the Branch. Although the Branch in common with other bodies in South Africa has only one official representative on the Bill Committee, seven out of the eleven members are Fellows of the Society, and the progress with the Draft Act now in preparation for presentation to the House of Assembly is due to the untiring and energetic work of the Branch Council.

INDIAN BRANCH.—The first annual meeting of the Indian Branch of the Society was due to be held at Bombay on April 27th, 1922, when it was anticipated that Mr. G. H. WENYON (Member of Council), whose professional engagements have necessitated a visit to India, would occupy the chair prior to returning home, when it is hoped he will be able personally to report progress to the Council.

BUILDING EXHIBITION.—The Council has passed a resolution conveying the Society's thanks for and appreciation of Mr. H. GREVILLE MONTGOMERY'S courtesy and hospitality which he so freely extended to the members during the Exhibition at Olympia.

The Society in South Africa.

Mr. J. S. DONALDSON has been elected President of the Transvaal Institute of Architects, Mr. ALLEN WILSON a Vice-President, and Messrs. BURT ANDREWS, HOWDEN, SINCLAIR and VEALE Members of Council.

Mr. G. J. HURST is the new President of the Natal Institute of Architects, and Mr. ING has been elected on the Council.

Honours for the President.

Shortly after Mr. E. J. Sadgrove was appointed to fill the vacant Presidential Chair of the Society, he was elected President of the Institute of Arbitrators. More recently Mr. Sadgrove has received the honour of being appointed to office in the Grand Lodge of English Freemasons, and at the Annual Festival of that Lodge on April 25th he was invested as an Assistant Grand Superintendent of Works. Thus is the Society and the Lodge honoured in the person of its President and Treasurer respectively, and thus does the recipient create a record in the Society by occupying the Presidential Chairs of two professional bodies concurrently, and by being appointed to office in Grand Lodge during that period.

"My Dream House."

A contributor to "*The Quiver*" of April 1922 has gone to the trouble of collating the views of representative people on the above question. The writer of the article states that Mrs. Pethick Lawrence needs no introduction to the public, but evidently well known architects do, as witness the following preface to one contribution.

"E. Guy Dawber, the great architect, who is a former president of the Architectural Association as well as of the Royal Institute of British Architects, a great house builder and garden planner as well as an authority on furniture, sends me a most helpful word. He says, in his modesty, 'I have no 'ideals,' being, I trust, a practical architect,' but as ideals can only be realised, or approached rather, on their practical side, my readers will be glad to hear the views of an expert." Mr. Guy Dawber has our sympathy.

The Library.

We hasten to put on record the first generous contribution to the Library which has been made in response to our appeal for books and funds. It consists of two charming little volumes on Spanish Architecture, and the benefactor to whom we owe them is Mr. Arthur Henry Beauchamp, a Licentiate, of Bournemouth.

The following are the titles of the books :—

TOLEDO. An historical and descriptive account. By Albert F. Calvert. With over 500 illustrations. London: John Lane, MCMVII.

ROYAL PALACES OF SPAIN. The seven principal palaces of the Spanish Kings. By Albert F. Calvert. With 164 illustrations. London: John Lane, MCMIX.

Other members are invited to copy.

CHAIN-BORROWING.

Many members have adopted a very efficient method for borrowing books, which may not inaptly be described as "chain-borrowing." It consists in enclosing a note with each book they return asking for the loan of another. In this way they keep up a continuous flow of books, and the advantages of this self-acting method are many. A book may be returned and another applied for the day after its receipt by the borrower.

THE CATALOGUE.

A fresh edition of the library catalogue has been desirable for some time past, and a number of enquiries have indeed been received for a completely up-to-date list of books. We may as well make it clear that the re-issue of the catalogue depends upon the four following factors :—

- (A) A fall in the cost of production ;
- (B) the completion of the process of expansion which is now taking place in the library ;
- (C) the subsidence of the stream of books which we doubtlessly expect as a result of our appeal ; and
- (D) the exhaustion of the 1914 edition.

Members are particularly requested to note the effect of their delay as set forth under (C) above, and to forward their gifts of books, etc., as soon as possible.

LIBRARY REGISTER.

A compound library register and receipt-book will have been introduced by the time these pages are read. Borrowers will in future be requested to adhere to the rule which requires a form of receipt to be filled in for each book borrowed. They are reminded that such receipts may, if desired, be sent in an open envelope at the printed paper rate.

ADDITIONS TO THE LIBRARY.

The following books have been added to the Reference Library during the month :—

DOCUMENTS DE FERRONNERIE ANCIENNE, DU XII^e AN XVIII^e SIÈCLE, par F. Contet. A portfolio containing 40 plates. 5th series. Paris, 1922.

MOTIFS DE TERRONNERIE ANCIENNE, DES XVII^e ET XVIII^e SIÈCLES, par J. F. Blondel et C. E. Briseux. A portfolio of 40 plates. Paris : Ch. Massin.

AMERICAN COMPETITIONS. Vol. III. New York: William Helburn, 1913.

The Loan Library has been increased with the following:—

THE BOOK OF BUNGALOWS. By R. Randall Phillips, editor of "Our Homes and Gardens." London: "Country Life" Publishing Offices, MCMXX.

COTTAGE BUILDING IN COB, PISÉ, CHALK AND CLAY. By Clough Williams-Ellis. London: "Country Life," MCMXX.

THE "COUNTRY LIFE" BOOK OF COTTAGES. By Laurence Weaver. London: "Country Life," MCMXIX.

FORM IN CIVILIZATION. Collected papers on Art and Labour. By W. R. Lethaby. London: The Oxford University Press, MCMXXII.

MONOGRAPH OF THE WORK OF CHARLES A. PLATT. With an Introduction by Royal Cortissoz. New York: The Architectural Book Publishing Co., MCMXXIII.

PAPERS ON HOSPITALS. By various authors. Seven papers on English, Continental and American hospitals. By A. Saxon Snell, Wm. Milburn, jun., Wm. A. Pite, H. Percy Adams and John Wilson. Reprinted from the Journals of The Society of Architects and of the R.I.B.A. of the period 1911-1922, and bound in one 4-to volume.

THEATRES AND MOTION PICTURE HOUSES. By Arthur S. Meloy. Illustrated with drawings by the Author. New York, 1916.

LICHTSPIELTHEATER. By Hans Schliepmann. With 109 illustrations of Cinematograph Theatres in Berlin. Berlin: Ernst Wasmuth, A.—G., 1914.

KEYSTONES OF BUILDING. By Inigo Thomas. London: S. Bell & Son.

The Amended Registration Law in New York State.

The Bly bill introduced in the New York State Assembly "amending the general business law in relation to the Registration of Architects," was passed by that body during the recent session. It provides for the registration of all architects practising in the state before 1 January, 1923, and eliminates the term "Registered Architect" substituting therefor the single word "Architect." It contains provision whereby action will be instituted against offenders who use the title improperly. An annual registration fee will be payable at the rate of \$2 per year in addition to the initial registration fee of \$25. This annual registration will make it possible to keep the records correctly. The bill has been signed by the Governor and is a law.

It will now be possible for competent architects who were in actual practice in New York State prior to April, 1915, to obtain registration certificates without examination if their applications are filed before the end of the current year, 1922, and on condition that they satisfy the Board as to their qualifications. All such architects may continue to practise without a certificate if they so desire. The amendment of the law does not affect the requirement in this respect, except to provide that every architect practising without a certificate will have to file an affidavit that he was in bona fide practice one year before the law was enacted.—"Journal A.I.A."

Who Is An Architect?

The following observations on the Qualifications, Unification, Registration and Education of Architects, are taken from the Journal of the American Institute of Architects, May, 1922.

The first impulse is to turn to our dictionary; if it happens to be the "Standard" you will find that he is "One skilled in practical architecture; one whose profession it is to devise the plans and ornamentation of buildings or other structures and direct their construction."

This does not seem to settle the question, at least in law. As a matter of fact the making of an Architect in some states requires long and serious preliminary and technical training while in another state a man not possessed of the same qualifications may be accepted as an Architect. The first state says he isn't an Architect and the second says that he is. They both say it by a standard of law.

The Royal Institute of British Architects, at a special meeting held in February of this year, seems to feel that an Architect is one who has the qualifications which would entitle him to become a member of that body and that any Parliamentary Bill for registration must limit the right to the title to those persons who have these qualifications. This led to an enlightening debate on "Unification" which appears to mean some provision by which all Architects may find cover. Their problem is a difficult one since, if membership in their society is an essential, some folks will lose their right to practise if they cannot pay their dues.

We have not solved the problem in our country by Federal act; it is doubtful if we could, even though there were no constitutional barriers in the way. We have twenty-two definitions to date covering that number of states; some day we shall have forty-eight.

The American Institute of Architects has, in the past, met the problem in its own way, as far as related to its own membership, but one cannot help speculating as to the future attitude of this representative body. Can the Institute demand anything but the best in granting membership? If it does insist on the highest standards, will not its field be limited to the states requiring the highest standard by law? It seems certain that the "Model Law" adopted by the Institute is a rule that it must use in testing the qualifications of candidates for membership.

It seems also fair to assume that a person calling himself an Architect in a State where the lawful use of the title does not meet the accepted standards of the Institute may not be accepted for Institute membership unless such person can pass the examinations and requirements of the State having the maximum standard.

The architects have the companionship, in their journey, of lawyers, doctors, teachers and others classed as members of learned professions. All kinds of expedients have been tried such as "reciprocal transfer"; but one state does not recognise the right of anyone in another state to govern its actions, or to examine its applicants for professional attainment.

One State says that you may be called an Architect if you are a Canadian, but not if you are a Mexican; other States say that you cannot be an Architect unless you have applied for American citizenship. We do not seem to let it bother us as it does our British brothers even though it may be a little confusing to interstate Societies.

A Contributor raises the question "Who is an Architect?" It seems safe to say that the legal definition is merely in the making. His observations as to the statutory differences of definition now existing in various of our State laws on registration, only sound a warning as to the difficulties that we shall encounter ere we come to a national agreement as to what is an architect. There are many complaints over the administration of the reciprocal features of our laws, and they spring, of course, from the differences to which we refer. If, for example, an architect passes a certain examination in order to be registered in his own State, does that entitle him to be called an architect in another State where the entrance examination is very much harder?

Our contributor speaks of the same difficulty in England, but here the trouble is occurring before registration. Parliament is unwilling to grant any law, it appears, until the architects come before it as a united body. "Unification" therefore seems necessary as a first measure, but this calls not only for a merger of The Society of Architects with the R.I.B.A., but very likely requires that all architects now practising in the British Isles be admitted, without examination, to the R.I.B.A. Over this question there are strong differences of opinion, for many members of the R.I.B.A. cannot swallow the wholesale admission plan. The price seems far in excess of the ultimate value to be obtained by registration. But it is likewise true that there is probably no other way. Members of the A.I.A., for example, in States where registration laws are now in force, had to suffer the humiliation of being registered in common with contractor-architects, builder-architects, and in one case we remember with an undertaker-architect. Of course this is not so bad as though they had been obliged to take these gentry into the Institute without examination, and we may well sympathize with the situation of our English confrères.

From the *Journal of the R.I.B.A.* one sees that the vital present is challenging the attention of our British confrères; the same social and sociological tendencies which have been working through us have muddied their heretofore clear and limpid professional stream. The tendency to put art and professionalism in the straight-jacket of law is one which is now manifesting itself with our British brethren, as it has long manifested and still is manifesting itself with us. Registration and Unification—how familiar they sound to us! Many of our states—twenty-three, to be exact—have registration or license laws. One other state, in which literature alone seems to be considered an art, forces architects to register under an Engineering Act; the twenty-three regarding architecture more or less as an art, treat it as such, regulating matters only which bear upon the health and safety and physical welfare of the public, except that one, in establishing qualifications, seeks to pass upon the capacity to design. So, fifty per cent. of our states—and on the initiative of the architects themselves, acting from some confused notion of service to the public or (and?) from distinctively selfish motives—have passed laws regulating the practice of a supreme art! But regulation by law is in the air and our British brethren and our own fifty per cent. as yet free and sane will have to come to it. There seems to be no inoculation against it. Materialism and legal and æsthetic formalism are stifling the spirit of freedom to create beauty in Great Britain as here in the United States. However, the R.I.B.A. has taken up, through its Committee reports, the principles of Registration and Unification and seems likely to adopt and establish them in spite of wise cautions, while our A.I.A. has up to now been able happily to avoid the issue. But it is going to come in spite of us—or to spite us. The architectural profession in both countries is becoming class-conscious. In Britain there always have been social classes which were conscious and self-conscious. Classes have existed in this country, but their self-consciousness has been regarded rather as a joke. But now in England, and the tendency is here

too among us, classes are taking on a new alignment, and the barber, the plumber, the whitewasher, the architect, are becoming class-conscious and must needs demand legislation which shall protect them in their self-asserted "rights" against all comers. How long, at this rate, will it be before we establish a caste system rivaling that of India in its wide ramifications, and this on a materialistic as well as on a spiritual basis? And as to Unification—some of the British reactionaries fear the effect of that And I, "if"—like Caesar—"my name were liable to fear," would fear with them. A class, especially an Artist Class, can be unified only in name, and in those things in which the law, not the law of the spirit but man-made law, can compress men into its mould. There can be true unity only when things of the Spirit—not selfish materialism or expectation of individual advancement—compel a fellowship of kindred souls. Souls are not necessarily kindred because the accompanying minds have decreed that the body should practise architecture. Then the questions arise, how shall art be free? How may art escape the fetters which formal education and "class-consciousness" are binding about it? How, at the same time, shall the public be protected in its physical well-being as affected by sanitary or unsanitary, safe or unsafe, buildings? The answer is easy. Establish a practicable building code: district, state and national. Permit a building to be built from any set of plans which are in consonance with the provisions of the code, no matter who makes those plans—be he painter, sculptor, baker, mason or architect. License the builder to erect a structure in accordance with those plans and if you can't get class-consciousness out of your system, or if your soul is burdened by the awful responsibility of the architect to the public, then protect the term Architect—with a big A—by examination along purely material and physical lines. Leave the spiritual man to grow with the spiritual growth and development of the race; and the public will be sufficiently protected; will be given a choice, through knowledge, as between the Architect and the mere builder or designer, and that is all the protection the law needs give the public. The public in this case is generally a wilfully ignorant or self-sufficient individual who needs the lessons of experience.

The *Journal of the R.I.B.A.* and the *Journal of the Society of Architects* give considerable space to architectural education. I read these documents and pronouncements without any noticeable quickening of the pulse—as I do those emanating from our own architectural press. I am much more concerned with our primary and secondary educational procedure and with the curricula of our colleges; for I assume that before "the great globe itself" dissolves architects mostly will be recruited from the ranks of educated, cultured men of wide sympathies and understanding. In a future day, let us hope not too remote, educated and cultured men will have been taught to observe and to record their observations in sketch and drawing throughout the period of kindergarten, school and college days. And, too, they will have been taught to use their hands in modelling and making, and their brains and imaginations in creating, in many fields. So that bye and bye they will be able to co-ordinate and correlate the activities of body and brain, of hand and heart. Then we will have a race prepared to create and enjoy art and capable of producing architects. The race is in no hurry to produce architects; that is an hysterical desire of individuals and schools. My hasty glance over these British Journals and periodicals informs that along with laws and education our brothers across the Atlantic interest themselves, as some of us do, in another form of "straight-jacket" for art: that is, the geometrical basis of art as expressing itself in formulæ involving fixed and unalterable proportions and ratios between triangles, or squares, or diagonals, or diameters. Some write books in earnest advocacy of these spontaneity crushing and spirit breaking formulæ—and some review them sanely, which is altogether an achievement.

IRVING K. POND.

Professional Classes Aid Council.

Many Architects have received help from the Professional Classes Aid Council, on which The Society of Architects is represented by Mr. Percy B. Tubbs, Past President. Now the P.C.A. Council are compelled, owing to lack of funds, to refuse applications for assistance with the education of children, grants in illness and convalescence, and other forms of help, and ask that donations to help fellow professional men in their needs, should be sent to the Professional Classes Aid Council, 251, Brompton Road, London, S.W. 8.

Honour where Honour is Due.

Mr. ERNEST M. POWERS, F.R.I.B.A., the outgoing President of the Association of Transvaal Architects in the course of his valedictory address says :—

About the year 1884 a strong movement in favour of the statutory registration of architects began in England but, finding little favour at that time with the governing body of the R.I.B.A., which continued a very conservative policy, resulted in the founding of The Society of Architects, whose primary object was to obtain legislation for the registration of Architects and although up to the present no Architects Registration Bill has been placed before British Parliament. It is largely due to the moral and financial support of The Society of Architects that our present Transvaal Act was promulgated.

In the Transvaal, Architects have enjoyed this status conferred upon them for the past 12 years, and in approaching the Union Parliament for an extension of the Architects' Act to the Union we shall be required to prove our worthiness of Registration during the past 12 years as justifying its extension. The fierce light of public opinion will be directed to our profession, and the actions of the members of it and our responsibilities are therefore great, and it is only by the integrity of our actions in exercising the duties of our profession that we can demonstrate that the responsibility we have assumed is not misplaced.

The Society of Architects' Lodge No. 3244.

At a regular meeting of the Lodge held at the Holborn Restaurant on May 10th, Mr. ERNEST E. JENKIN (Licentiate Member of the Council), of Exeter, was initiated, and Mr. C. E. GAMON (Fellow), the present Master of the Accra Lodge, Gold Coast, was elected as a joining member.

Mr. THOS. WALLIS, the Senior Warden, was elected as Master for the ensuing year, and Mr. W. HOE as Treasurer.

The congratulations of the Lodge were offered to Mr. E. J. SADGROVE, a Past Master and present Treasurer of the Lodge, on the honour conferred upon him and through him upon the Lodge by his appointment to the office of Assistant Grand Superintendent of Works in the Grand Lodge of England.

Ordinary Meeting.

An Ordinary Meeting of the Society of Architects will be held at 28, Bedford Square, W.C.1., on Thursday, June 15th, at six o'clock in the evening, for the election of members and other routine business.

The Society of Architects.

Sessional Arrangements, 1922.

Subject to additions and revisions of which notice will be given in the Journal.

June 1	Local Hon. Secretaries' reports due.	Sept. 1	Local Hon. Secretaries' reports due. Entries close for October Membership Examination. Issue of Library books resumed.
" 4	Whit Sunday.	" 7	Council Meeting 3 p.m.
" 5	Bank Holiday.	" 22	Membership Examination opens.
" 8	Practice Committee 3.30 p.m.	" 29	Michaelmas Day.
" 10	Victory Scholarship Competition Part I.	" 30	Last day for delivering Nominations for Council and Architectural Scholarship Drawings.
" 15	Council 5 p.m.—Ordinary Meeting 6 p.m.	Oct. 1	Local Hon. Secretaries' annual reports due.
" 24	Midsummer Day.	" 5	Practice Committee 3.30 p.m.
July 1	Local Hon. Secretaries' reports due.	" 9	Last date for delivering Ballot Papers for Council Election, and for depositing Final designs in Part II of the second half yearly Design Competition
" 15	Victory Scholarship Competition, Part II.	" 11	R. A. Chapter, 5 p.m., Holborn Restaurant.
" 31	All borrowed books to be returned to the library for revision of catalogue.	" 12	Council 5 p.m.—Special General Meeting 8 p.m. Election of Council for 1922-23.
Aug. 1	Local Hon. Secretaries' reports due.	" 31	End of Session.
" 7	Last day for delivering Preliminary sketch designs in Part I of the second half-yearly Design Competition.	Nov. 3	Membership Examination closes.

** The time and other details of the Ordinary Meetings will be announced in the Journal.*

THE
Journal
OF
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FOUNDED 1884. INCORPORATED 1893.

Including Transactions and Architectural Notes.

No. 9. Vol XV.

JULY, 1922.

New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.

The Value of Legal Service to the Architect.

Some of the American Architectural Journals regularly devote space to information on the legal responsibilities of the architect, and urge the advisability of a proper understanding at the outset between architect and client in regard to what an architect's services cover and what his remuneration shall be. In the *Architectural Forum* for May, 1922, Mr. C. Stanley Taylor discusses the question of the architect's agreement with the owner, after suggesting suitable forms of letters and other documents.

The best possible advice that we can extend to every architect, says Mr. Taylor, is that he will find it greatly to his advantage to retain legal service regularly. This does not constitute a great expense, and is really a form of insurance which will serve not only to prevent direct financial loss, but in many instances will guarantee better client relationships, because of the consequent avoidance of those points of disagreement which may arise unexpectedly and without any knowing breach of good faith.

The services of an attorney from the architect's viewpoint are of value, not only in establishing proper client relationships, but in connection with the letting of contracts and sub-contracts and other business responsibilities which develop in connection with architectural practice. We can cite many instances where the architect, as agent for the owner, has made serious business blunders which would have been avoided through good legal advice. Perhaps one-half of the misunderstandings which arise between the architect and the owner would be eliminated if the advice of a good lawyer had been asked and followed at times when agreements involving financial liability were being made.

Victory Scholarship Fund.

Donations to this fund have been received from Mr. H. R. Sayer, Mr. A. H. Beauchamp, Mr. F. A. Roberts, and Rev. G. F. George, which are included in the sum of £791, the amount at which the Fund at present stands.

The Council hope that any Members who have not yet subscribed will make some contribution to the sum of £1,209 required to complete the Fund.

April 1922 Membership (2b) Examination.

Out of the eleven candidates who sat in the April 1922 Membership (2b) Examination, the following satisfied the Examiners:—CECIL ERNEST MILLARD FILLMORE, Newhaven, Hollyhedge Road, West Bromwich (Certificate of Merit); ARNOLD WADDICAR, Laburnum House, Pool Street, Bolton; WILLIAM JOHN WERRY, 33, Hubert Road, East Ham, E. 6. (Certificate of Merit).

The next examination will be held in October. Entries close on September 1st. Awards of the total value of £180 are offered together with other prizes.

Proceedings of the Society.

An Ordinary Meeting of The Society of Architects was held at 28, Bedford Square, W.C.1, on Thursday, June 15th, 1922, at 6 p.m.

The President, Mr. EDWIN J. SADGROVE, having taken the Chair, the minutes of the previous meeting, as printed in the Journal, were taken as read, and were confirmed and signed.

The following announcements were made:—Nominations: For Membership, 3.

ADMISSIONS:—

AS LICENTIATES.—MOORE, JOHN ALFRED, 25, Neville Road, Stoke Newington, N.16; PRATT, EDWIN LAMBERT, 2, Church Place, Greenock; SMITH, FREDERICK JAMES, "Wayside," Avenue Road, Kenilworth.

AS STUDENTS.—TAYLOR-DOWNES, FRANCIS, "Lansdowne Lodge," Colwyn Bay; WILLIS, NORMAN, 39, Summerhill Street, Newcastle-upon-Tyne.

RESIGNATIONS.—FELLOW: RUTHEN, SIR CHARLES TAMLIN, O.B.E., Ministry of Health, S.W.1; LICENTIATE: ROWLAND, DAVID GODFREY, 240, Clapham Road, Stockwell, S.W.9.

ELECTIONS:—The following candidates, whose nominations had been previously announced and published, were submitted for election under Articles 12 and 17 of the Articles of Association, and were declared to be duly elected:—

AS FELLOW.—GREEN, JAMES JAMESON, "Hillsboro," Riverbank Road, Heswall, Cheshire.

AS MEMBERS.—DITCHBURN, DAVID, 11, Pilgrim Street, Newcastle-upon-Tyne; DOYLE, LAWRENCE, 14, Shaw Lane, Headingley, Leeds; HODGSON, FREDERICK JOHN WITLOCK, 161, High Street, Guildford, Surrey; MILNE, JOHN F., Abbots Lodge, New Barnet.

The Chairman announced that the Assessors had made the following awards in the First Half-Yearly Design Competition:—

Prize divided between: H. ANDERSON, Student, of Blean, Nr. Canterbury (£30); and H. SCOTT DALBY, Licentiate, of Weaverham, Cheshire (£10); placed Third: E. K. RAINFORD, Student, of Hoylake, Cheshire; Fourth: R. H. SHREWSBURY, Licentiate, of Eccles.

The proceedings then terminated.

Bombay Branch Annual Meeting.

The first annual meeting of the Indian (including Ceylon and Burma), Branch of The Society of Architects, London, was held on Thursday, 27th April, in the architectural room of the Bombay School of Art. Mr. G. H. Wenyon, F.S.ARC., presided and was re-elected as President. Mr. A. J. Macdonald, M.S.A. and Mr. S. F. Bharoocha, M.S.A., were elected Joint Honorary Secretaries and Treasurers and Prof. T. A. Cable, F.S.ARC., A.R.I.B.A., Mr. V. A. Taraporevala, M.S.A., Mr. A. Bell, M.S.A. and Mr. A. M. Reith, O.B.E., M.S.A., members of the Committee.

A reply from the local Secretary of the Bombay Branch to the Private Secretary to His Excellency the Governor was read before the meeting, thanking His Excellency for the interest he sought to evince in the formation of the Branch and thus encouraging the work of the Society in this country.

The President then opened a discussion with regard to competitions and it was arranged that the Committee should take steps to enlighten the public at large and other bodies in particular on the necessity of such competitions being held, in strict conformity with the Rules and Regulations of The Society of Architects. It was also arranged that the Branch should make arrangements for lectures and papers with a view to interesting the public in the work of the Society.

Mr. G. H. Wenyon, F.S.ARC., in his presidential address said: The branch came into existence only last spring, a preliminary meeting having been held in Bombay just before he left for England, and now this new branch of The Society of Architects had made such a vigorous start that he was full of hope for its future. And it was natural that a young institution should set its mind on the future rather than on the past. But if they, as a newly-founded branch, the off shoot of a young, vigorous and progressive Society like The Society of Architects, had as yet no past, still in India as elsewhere, the past was inextricably woven into the present, a part of their very selves. They did not intend, however, to concern themselves in the first place with the past, but with trying to see how the past may minister to the future benefit of those to whom, in their capacity as architects, they stood in the position of advisers and trustees.

The present position of the architect in India was a very mixed and, in some cases, almost a doubtful one. In the first place they had the P.W.D., with its body of architects and draughtsmen, and the R.E., who did so much of the work that an architect should be called upon to undertake (and who like many other men with a scientific training in pure construction, imagine that, because they can build a wall which will not fall down, and put a roof on it that will not blow off or let in the wet, and make a drawing from which a mason can work, they have mastered the whole science and art of architecture and are capable of designing a convenient house or even a large public building). These two bodies of functionaries are firmly entrenched, and ready to defend their territory against all comers, and to look upon architects as intruders to be treated as irregulars, or even as freebooters!

Finally, there were the Indian builders and craftsmen capable of planning and carrying out certain buildings in the traditional style of the country, but who

were unequal, without trained European direction, of undertaking the plan and arrangement of the large and complicated structures which modern requirements call for in India. He had no desire, however, to enter into a controversy as to the relative merits and demerits of those various classes of architects through whom the work of that country was carried out. He would rather review the problems which faced the independent architect and try to indicate the lines on which he should approach them.

The ever-increasing perplexities of modern social organisation gradually and inevitably being introduced into India have set up a demand for buildings of a type hitherto unknown in that country where, up to now, very simple expedients in planning had sufficed or had been tolerated. These buildings demand, in the first place, skilful planning, to ensure that no space is wasted and that the cost of construction is not needlessly increased; that all the various departments and sub-departments—and the units which go to make up each department—are in proper relation to each other and convenient of access; a demand which calls for no little skill, knowledge and experience. Whether it is a block of Government or business offices, or flats, of a large shop or a hotel, this question of planning is at the root of the whole. An ill-planned building was a waste of money and a source of worry, loss of time, and in some cases even of ill-health, to those who use it. The saving made by omitting to employ an architect was paid out many times over in other ways, and to produce a suitably planned or arranged buildings, expert knowledge was necessary and was a good investment. This was not all, the building must not only be suitable for its purposes, but fit to look at; not an eyesore, but an adornment to the city in which it stands and suitable to the character of the country for which it was intended. There was a courtesy due from the architect and the owner to their fellow citizens.

The Architect to-day, was in fact, in the case of buildings on a big scale, rapidly assuming the position of the master-builder of the middle ages, who decided the broad lines on which a building was to proceed, provided the plans and elevations, superintended the whole, and saw that it was carried out in accordance with his inspiration and knowledge, and left the working out of details to his subordinates and helpers, who were largely trained by him, or hand worked under a similar tradition. Such was the complication of the architects' profession now-a-days that, except in the case of a moderate sized dwelling house, no one man can hope to plan the building and himself provide all the details required; indeed he doubted if this was ever attempted except during the 19th century. He seemed to see, in India, the hope of a fruitful co-operation or revival of their traditional arts including that of architecture.

That seemed to suggest the growth, or building up, of a style in which organising ability and experience might be combined with the skill in masonry, with the mastery in detail used in ornaments which the Indian master builders and craftsmen possess—in which the planning, and the elevation growing of necessity out of that plan, would be thought out by the European or European trained architect, and where, under a supreme and directing brain, a harmonious whole would be produced with much beautiful and ornamental detail, fresh and spontaneous—not worked out in the distant office on the drawing board, but carried out on the spot by skilled craftsmen working under the guidance of a master-mind: details and ornament growing, so to speak, upon the building itself. With the work of Indian craftsmen will in many cases and for obvious reasons be combined the best work of the skilled artists, designers and artificers of Great Britain, who will supply much that in many cases this country cannot give, and furnish sources of inspiration for the future.

But he was inclined to dwell mostly at present on the necessity in that country for the employment of home trained architects, enlarged by the study of what is noblest in the buildings of India and helping to carry on the work inaugurated lately by the Government of India, that, namely, of combining, under skilled direction, which draws its inspiration from Great Britain, the best elements, in their different ways, that each country can afford. And, in this connection, let it be remembered that, of all the arts, architecture is that which lends itself least to innovation, unthinking change, and rash experiment; of all the arts in the one which proceeds most gradually and step by step, not leaving one foothold before another is gained; which was most deeply rooted in tradition; of all arts the most restricted within the bounds, not of what is imaginable, but of what is realisable. This fact is worth pondering on.

In the progress and furtherance of this art, the constitution of an Indian Branch of The Society of Architects was a step towards that co-operation for a common good which the Government of that country had in its mind.

If the inauguration of an Indian branch of The Society of Architects is meant as a step towards co-operation for not only the "progress and furtherance" of architecture but for restoring it to its original position as an art as well, it may be welcomed. It is therefore unnecessary, perhaps, to insist at present on the precise nature of that co-operation. Mr. Wenyon's presidential address on the occasion contains statements with which few will quarrel. The position of the architect in this country is, as he says, "very mixed" and in some cases, "almost a doubtful one." It has been possible because the majority of architects in this country have failed to acknowledge their responsibilities as artists and craftsmen. They have been lacking in the "courtesy" due from the architect to his fellow citizens. It is probably the same lack of clear and complete insight into the requirements of the people of this country that has prevented Mr. Wenyon from understanding the total implications of the statements he has repeated. It may be true that the ever-increasing complexities of modern social organization have set up a demand for buildings of a novel type. If that is so, it is not by any means a peculiarity of India. Modern conditions have made the demand universal. And if architects aim at the future they will have to answer that demand. The needs of the times render a change in the methods of training essential for all architects everywhere, in Europe and America as well as in India and Japan. But the training will be more than wasted if it is based on formulas and not on the needs and aspirations of the people. Expert knowledge is necessary and it is probably a "good investment." But the point is, how is the average citizen to estimate the knowledge and ability of the expert! An "expert" in England is, obviously, not necessarily an expert in India. An expert in country houses is not necessarily an expert in public buildings in towns. A provincial architect of repute knows probably less about monumental buildings in large towns and cities than the senior apprentice of an architect in the metropolis. Mr. Wenyon finds that the buildings erected during the last thirty or forty years in Bombay and Calcutta have not been handled so as to produce "the most suitable results" either from the æsthetic or climatic point of view. The deplorable results are mainly due to "expert" handling. The handling was scarcely necessary. It was certainly not a good investment. In the battle between the "experts" from abroad the people of this country, their rights, needs and aspirations were either forgotten or ignored. The results were therefore bad.—From the *Bombay Chronicle*, May 20, 1922.

The Library.

We have rediscovered the old truth that one example is worth ten of the most earnest exhortations. The gift of books announced in the June *Journal* has taken root and multiplied; and this month we have the gratification of putting several more gifts on record. Mr. Price Davies' book in the list given below was presented by the author; the two books on hospitals are duplicate copies of works already in the Loan Library, and come from Mr. E. J. Hamilton. The three others have been presented by their respective publishers, to whom our thanks are also due.

Borrowers are reminded that all books should be returned to the Library by July 31, when the annual revision of the Catalogue takes place.

BOOKS PRESENTED.

LUTYENS HOUSES AND GARDENS. By Sir Lawrence Weaver. London: The "Country Life" Press, 1921. 10s. 6d. net.

THE BUILDING ESTIMATOR. By B. Price Davies. London: The Educational Publishing Co.

HOW TO ESTIMATE. Fourth Edition (reprinted). By J. T. Rea. London: B. T. Batsford, Ltd.

GUIDE TO ENGLISH GOTHIC ARCHITECTURE. By S. Gardner. Cambridge: The University Press, 1922. 16s. net.

COTTAGE HOSPITALS. By Henry C. Burdett. London: The Scientific Press, 1896.

HOSPITAL CONSTRUCTION. By Douglas Galton. Oxford: The Clarendon Press, 1893.

BOOKS PURCHASED.

FERIEHYTTEN. Copenhagen: Politiken Press.

MAKING A GARAGE. By A. Raymond Ellis.

*EDIFICES DE ROME ANTIQUE. By Desgodetz. Paris: J. B. Coignard, 1682.

THE LAW AFFECTING SEWERS. By Arthur P. Poley. London: Eyre & Spottiswoode, 1905.

VALUATIONS AND COMPENSATIONS. Fourth Edition. By Fletcher. London: B. T. Batsford, Ltd., 1913.

DILAPIDATIONS. By Macer. London: The "Estates Gazette," Ltd., 1920.

ARBITRATIONS. Third Edition. By B. Fletcher. London: B. T. Batsford, Ltd., 1904.

LONDON BUILDING ACTS. Fifth Edition. By B. Fletcher. London: B. T. Batsford, Ltd., 1914.

LIGHT AND AIR. Fifth Edition. By B. Fletcher. London: B. T. Batsford, Ltd., 1908.

ARCHITECT'S PRICE BOOK. London: E. and F. N. Spon, 1922.

* Placed in the Reference Library.

- THE SERVANTLESS HOUSE. By R. Randal Phillips. London: The "Country Life" Press, 1920.
- MODERN ROAD CONSTRUCTION. By Austin T. Byrne. Chicago: American Technical Society, 1919.
- MODERN FARM BUILDINGS. By Alfred Hopkins. New York: Robert McBride & Co., 1920.
- THE ARCHITECTURE OF ANCIENT EGYPT. By Edward Bell. London: G. Bell & Sons, 1915.
- BUNGALOWS. By Henry H. Saylor. New York: Robert McBride & Co., 1920.
- BUILDING REPAIRS. By E. C. Blake. London: B. T. Batsford, Ltd., 1920.
- ITALIAN RENAISSANCE ARCHITECTURE. By Gromort. Paris: A. Vincent, 1922.
- LE STYLE EMPIRE, 1st series. By J. Vacquier. Paris: F. Contet, 1920.
- SMALL COUNTRY HOUSES. Vol. II. By Sir Lawrence Weaver. The "Country Life" Press, 1922.
- MEDLEVAL ART. By W. R. Lethaby. London: Duckworth & Co., 1912.
- LONDON HOUSES. By Richardson and Gill. London: B. T. Batsford, Ltd., 1911.
- ELEMENTS ET THEORIE DE L'ARCHITECTURE, 4 Vols. By J. Guadet. Paris: Librairie de la Construction Moderne.
- OLD COTTAGES AND FARMHOUSES IN THE COTSWOLDS. By Guy Dawber. London: B. T. Batsford, Ltd., 1908.
- OLD COTTAGES AND FARMHOUSES IN SURREY. By Curtis Green. London: B. T. Batsford, Ltd., 1905.

"Victory Scholarship," 1922.

The entries received this year for the "Victory Scholarship" were even more numerous than those of 1921, and numbered 66 altogether. Fifty-six designs were received from competitors sitting at Cambridge, Glasgow, Leeds, Liverpool, London (two Centres) and Sheffield on Saturday, June 10, from 10 a.m. to 10 p.m. The programme, which was handed to each competitor upon arrival, consisted of a Ceremonial Staircase. The Jury of Assessors, after long and careful deliberation, submitted the following report:—

We, the undersigned, being the JURY OF ASSESSORS in the Society of Architects' Victory Scholarship Preliminary Competition, have to-day selected ten drawings bearing the following Index Nos. for the Final Competition:—63, 65, 68, 71, 81, 95, 97, 99, 107, 116.

Signed: ARTHUR J. DAVIS, EDWARD R. F. COLE, T. HAROLD HUGHES, F. BILLEREY, H. C. HUGHES, L. SYLVESTER SULLIVAN, HOWARD ROBERTSON, L. H. BUCKNELL.

The authors of these designs were then declared to be as follows:—

J. A. Jellicoe, of London (68); J. C. Shepherd, of London (65); N. C. Mackey, of London (68); D. Brooke, of Liverpool (71); G. F. Shanks, of Glasgow (81); E. N. Channon, of London (95); H. St. John Harrison, of London (97); A. S. Knott, of London (99); Keith D. P. Murray, of London (107); P. Hardy, of London (116).

The Jury of Assessors also fixed the Programme for the Final Competition, the esquisse for which will be held in London on Saturday, July 15.

The drawings will be on view at 28, Bedford Square, until July 14th, between the hours of 10 a.m. and 5 p.m., or at other hours by arrangement with the Secretary.

Reviews.

The Things which are Seen.*

It is good that people should be obliged, from time to time, to take stock of their convictions: convictions which probably have been held unaltered for so long that they have not only ceased to be enquired into, but it has even been forgotten that any enquiry is possible. Mr. Trystan Edwards' book, or at all events the first, and in a lesser degree, the third part of it, will come as a shock to those of us who take things for granted; and if the effect of being metaphorically stood on one's head, turned round three times, and then told to walk straight to the door is not to convert us at once to Mr. Edwards' point of view, it is at least likely to induce us to take stock of, and perhaps re-arrange, the contents of the brain that has been so violently disturbed. The title, the author tells us, came as the result of hearing a sermon in which the preacher warned his hearers very emphatically not to set too high a value on the visible things of the world. Struck by this inhuman disdain, our author was moved to appraise and re-appraise the visual arts: in other words, to enunciate a new

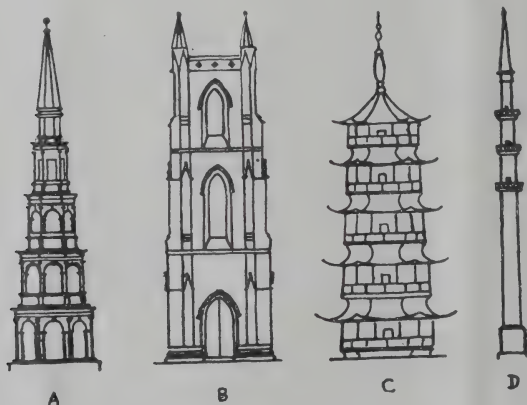


FIG. 25.

The above illustration†, from "The Things which are seen," by Trystan Edwards, shows how the canon of number applies equally to all the styles of architecture. The structures represented would produce a highly disagreeable effect if they had only two stages.

*A revaluation of the visual arts. By A. Trystan Edwards, M.A., formerly Scholar of Hertford College, Oxford, A.R.I.B.A. and A.M.T.P.I. London: Philip Allan & Co., Quality Court, Chancery Lane.

† Reproduced, together with those on the following pages, by courtesy of the publisher.

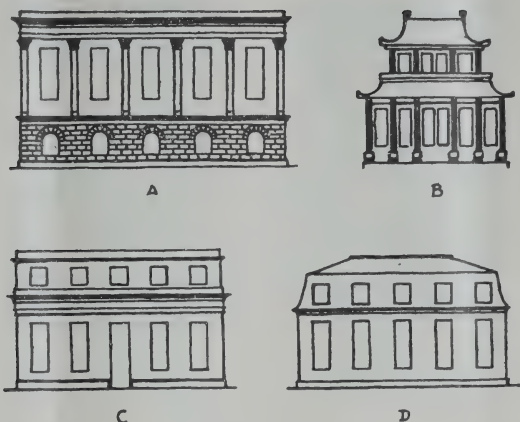


FIG. 24.

Two ways in which the duality of doors and windows can be resolved. Either the ground floor can be reduced to a basement (A), or else the top floor can be made into an attic (B, C, D).

doctrine of æsthetics in which the purely visual arts (excluding thus poetry, music and cookery) were to be arranged in a new order of importance.

The result of his enquiry was to convince him that the valuation which up to the present has found acceptance is wrong; and in the first part of his book, "The Hierarchy of the Arts," he proceeds deliberately to turn the scale upside down, making the first last and the last first, with the result that what we have been taught to reverence as "The Fine Arts," Architecture, Painting and Sculpture, come at the bottom, and Human Beauty, Manners and Dress are placed at the top.

How did all this happen? It is brought about by the application of a new touchstone: the touchstone being not the intellectual, technical and æsthetic equipment necessary for the production of a masterpiece in one or other of the Fine Arts—which, I take it, has been the cause of the high value which has till now been assigned to them—but the judgment of mankind, "that mature judgment" as he calls it, "which finds its reflection in the opinions of the average man."

Now with this touchstone I am not disposed to quarrel: on the contrary, it is, for personal reasons, rather grateful to me. For late in the year 1916 I published a little book, which sank into oblivion, making hardly a ripple as it sank, called "The Coming War," a title which being taken to refer to a possible future war to come after that which was not yet finished, and of which we were already not a little weary, perhaps scared off some intending readers, while all I intended to deal with was modern industrial and social conditions in relation to the inter-

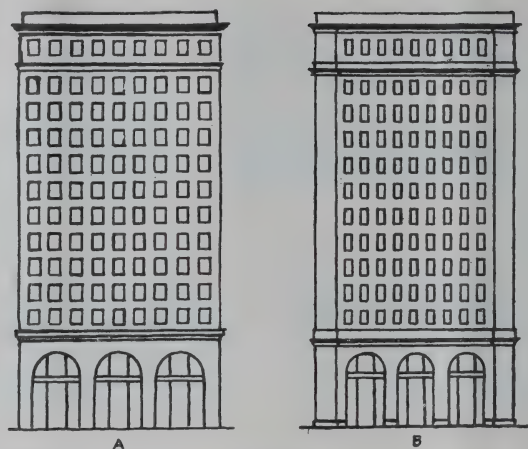


FIG. 60

The above illustration shows the effect produced by a skyscraper with and without "lateral punctuation." Note the lack of unity in A, remedied in the design of B.

national industrial struggle which seemed bound to follow the war then being carried on. In this work I referred, in discussing social and aesthetic matters, very largely to the opinion of "the average man." I find, in fact, that I said as follows:—"The relations of Art and Science, and the spheres to be assigned to each, depend largely upon the attitude, we will not say of the man in the street, for the phrase as well as being misleading, has been overworked, but of the average man and woman: let us say the average human being. If you cannot affect the mind of average human beings, or get them to acquiesce in your views in the long run, your labour is in vain, your views will only affect a coterie." From this I drew conclusions which were not as subversive as, though not altogether unlike, Mr. Edwards'. I included a disquisition, I am glad to say, on the importance of good manners, with some remarks on the arts in general, and on what I may call the "hothouse" cultivation of the Fine Arts in particular, and their detachment from daily life, with which I think Mr. Edwards would agree. I am not a little proud of being thought to this small extent a precursor of Mr. Edwards, and to a large extent I am with him in what he says. But not altogether. I do not deny his sincerity, nor the great interest of the views he puts forward; but I suspect him a little, in addition, of a desire to shock the average man, *épater le bourgeois*, in fact, and also of being to a certain extent a victim, not unwilling, of the process known as "the mechanical operation of the spirit"; of the cultivation of the doctrine of opposites, whereby we are led to declare that the exact opposite of the generally accepted view on such and such a subject is the truth; that what has hitherto been thought base is holy, and

that what was thought holy is really base. But to examine our author's reasoning. The effect, he tells us, of the right cultivation of the arts should be the existence of a beautiful world inhabited by a race of beautiful human beings, free from the stigmata of disease, poverty and vice. Ugliness in human beings is, in fact, a living reproach to the society which tolerates it; and that it does not revolt us to the point of

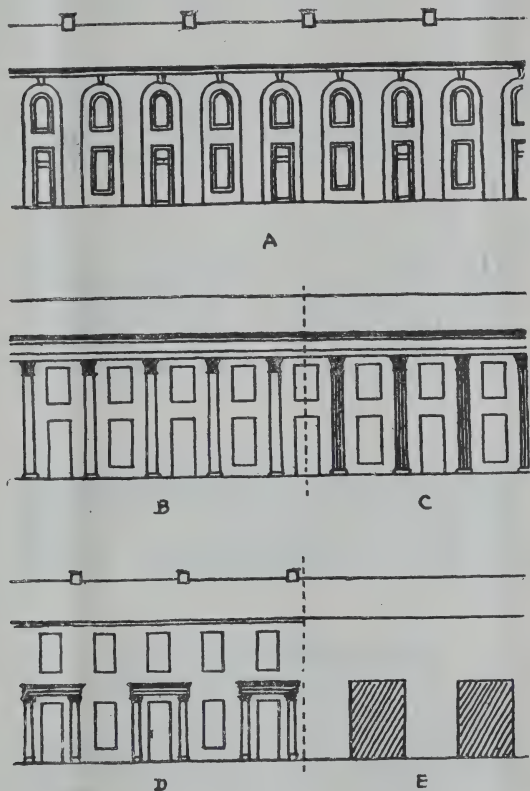


FIG. 21

The problem of the two-storey façade. The two main solutions are, firstly, the vertical grouping shewn in A, B and C; and, secondly, the emphasising of the doorway, as in D. The visual pattern of a façade treated in this latter manner would appear to be something like E.

determining to exterminate such ugliness, is the measure of our base acquiescence. Having thus laid his foundations in a beautiful and healthy race, he tells us that the next most important thing is that the race should have good manners. As to the extreme importance of these I am, as I have already said, with Mr. Edwards all the way. Good manners are a question of self-respect of human dignity, and of that respect for others which a recognition of this self-respect and dignity brings with it. Each of us is in fact inherently entitled to decent consideration from the very fact that he is a human being, no matter whether rich or poor. Having thus built up, or proved, the necessity for a well favoured and well-mannered race, there comes the question of dress. We all have to wear clothes; they are in fact, a large part of the appearance we present to others. Good manners imply that we should consider the feelings of others, and in regard to dress, present ourselves to them in the most pleasing way possible. Having thus obtained a well looking, well mannered, well dressed race, it is clear that they will need not to say exact, suitable surroundings; and the arts of architecture, painting and sculpture will

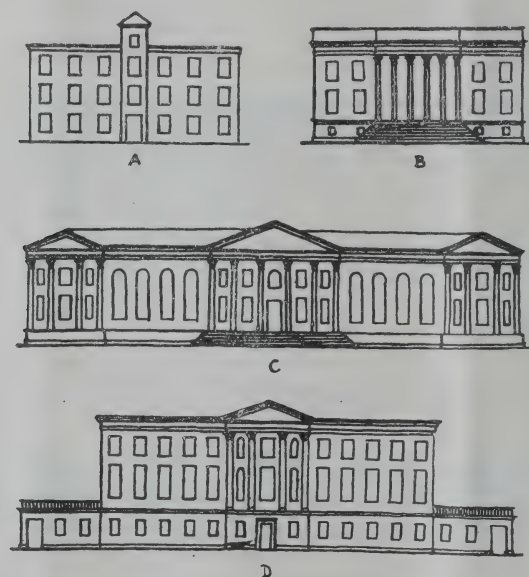


FIG. 27.

The above illustration shows how the duality arising from the vertical division of a façade may be resolved. The central feature in A, which cuts the façade in two, is given greater importance in B, and in C and D forms part of a group with the lateral features.

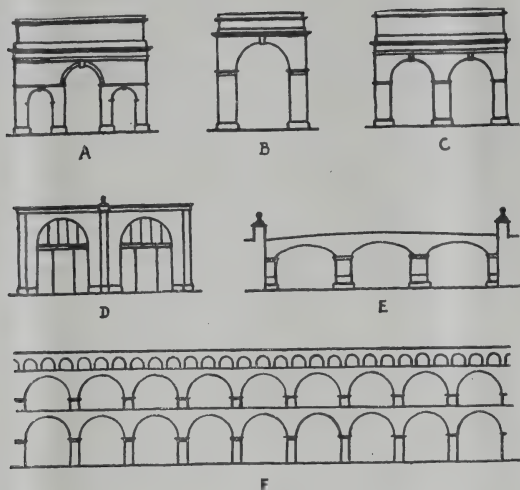


FIG. 35.

The canon of number illustrated in another manner. A, B, E and F are satisfactory; C and D are not, since they are composed of two equal divisions.

perforce produce works which are a fit setting for beings who, themselves dignified and beautiful, will not tolerate ignoble and mean surroundings; first in the houses (and in the cities made up of houses) which they inhabit, and then in their contents in the shape of works of art, decorations and furniture. Thus by raising ourselves, we raise every standard with us. This, I think, is a not unfair summary of the author's reasoning in the first part of his book. The third part of the book, called "The Human Agent," is really a continuation and detailing of the first part. It is a series of considerations of the artist in relation to other members of society; the Statesman, the Engineer, the Mathematician, the Historian, from the point of view laid down in the first part, brilliantly argued, and crammed with epigrams. These are too numerous to be extensively quoted, but I should like to give the following, on eccentricity in art:—"All the arts," he says, "have eccentric phases which represent a complete break from the familiar traditions, and these phases are novel inasmuch as their like has never been seen before; the authors of such developments, however, have not achieved anything meritorious, for, in ignoring antiquity, they have repudiated the element of reason exemplified in antiquity, which same reason must find expression, albeit in a slightly different manner, in the future also. *The punishment which befalls those who cut themselves off from the past is that they can never really be modern, they can never make fresh conquests for the human spirit.*" And there are many other such passages to reward the reader.

Between these comes Part II., a discussion on "Form and Subject," consisting chiefly of that dangerous thing, "A Grammar of Design," which rather breaks the thread of the discourse. Of this I can only say that, while it contains many truths, it is as unsatisfactory as all other attempts to reduce beauty line and proportion to exact rule; moreover the author's powers as a draughtsman are unluckily not equal to his powers as a literary exponent, whereby his arguments suffer. A more elegant touch in the illustrator would have better aided his cause, for the difference between the approved and the reprobated example does not, owing to this defect, strike the eye as it should. The author's arguments, as I have said, are striking and deserving of study and meditation. Did the arts of human beauty, manners and dress receive but a portion of what he demands for them, I have no doubt we should advance greatly in what he calls "The Minor Arts," but I am not quite convinced that Painting, Sculpture and Architecture can safely be condemned as "minor arts," or that in view of the higher qualifications that the production of masterpieces in these minor arts of Painting, Sculpture and Architecture demand it is safe to relegate them so confidently to the lowest seat at the feast. Mr. Edwards' arguments remind me of a pronouncement by a character in one of O. Henry's stories. I apologise to Mr. Edwards for the source of my illustration, and trust he will forgive me on the ground of what, to me of course, appears to be its appositeness. The quotation is as follows:—"Tell me" says I, "which is of the utmost value to mankind, literature or horse-racing?" "Why, er . . . the poets and the great writers have got the call, of course," says Bill. "Exactly," says I. "Then why do the master minds of finance and philanthropy," says I, "charge us two dollars to get into a race track, and let us into a library free? Is that distilling into the masses," says I, "a correct estimate of the relative value of the two means of self-culture and disorder?"

Is Mr. Trystan Edwards distilling into our minds a correct estimate of the relative value of the forms of art, when he puts the "Fine Arts" at the bottom of the scale, and exalts above them the means which he considers would lead to their better cultivation and appreciation? I am not so sure, but I am sure that he has performed an uncommonly difficult feat; that of obliging those who read his book to think, and to think hard.

AMEROSE POYNTER.

An Exhibition of Hygiene.

An Exhibition of Industrial and Scientific Hygiene is to be held at Strasburg from June to October, 1923, in celebration of the centenary of Pasteur's birth.

The Exhibition, which is being organised by the director of the "Institut d'Hygiene," under the auspices of the town and university of Strasburg, and with the support of leading members of the French Government, is intended to provide a comprehensive display of medical and scientific apparatus, products and literature illustrative of the latest developments of research connected with hygiene in all its branches, including building and town planning, food preservation, agriculture, etc.

A series of important medical conferences is being arranged in connection with the Exhibition, and as the programme for the centenary celebrations also includes a number of sporting events and festivities it is anticipated that, apart from the interest ordinarily attaching to the town in connection with the Rhine tourist traffic, Strasburg will be a centre of great attraction during the period of the Exhibition.

The Glory That Was.*

This little book, a concise history of Greece from the Mycenaean epoch to the time of Alexander the Great is written largely from the standpoint of philosophy, and though architecture is not discussed at length in its pages, yet much light is thrown upon it by the study of the races which produced it, and of their attitude to life.

The old civilisation of Crete and the neighbouring shores of the Aegean; the civilisation which produced Knossos, Tiryns, and Mycenae, carried on the same traditions that we are familiar with in the art of Egypt and Assyria. It belonged to the period of princes, palaces, and pageantry; skilled craftsmen there were in plenty, but art and architecture were following old paths.

Then, from the North, came the Dorians, and with them a new epoch. The intermingling of the invaders with the older inhabitants of Greece produced, at length, a new civilisation, dimly conscious of tradition, but unhampered by it, and with a new outlook upon life. At the same time the emigrants from the Peloponnesus, many hailing from the Ionian Islands, gave us the colonies of Asia Minor and the neighbouring archipelago.

Now begins the period of the city-state, and of democracy. Its early architecture reflects the simplicity of its peasant citizens. The gathering together in cities, at first for the sake of protection, gave opportunity for self development and the growth of culture, as evidenced in philosophy, literature and drama. Its architecture, too, grows in culture and confidence, until it culminates in those buildings which are the glory of the Acropolis at Athens.

The artists and statesmen of this time were ever the servants of the State, in such small communities each was known to all, and his work followed with interest. Building was often the result of movements partly social, partly political, just as if to-day, the successful party at an election built new public buildings to celebrate their victory.

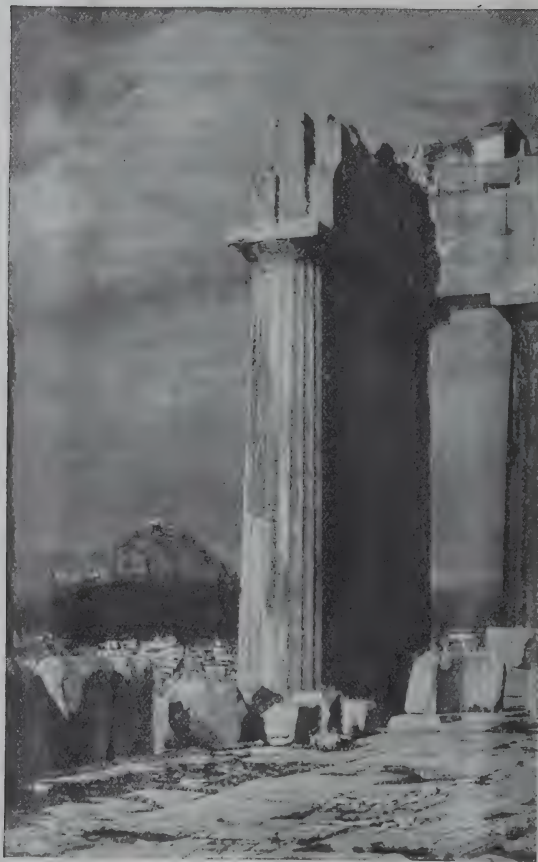
Public opinion could change or curtail operations, as happened indeed in the Propylaea, originally planned to extend over a site which sentiment held too sacred; an interference which, though it lost to us the ideal Propylaea of Mnesicles, gave us in compensation the temple of the Winged Victory.

When Greek civilisation had enlarged its bounds along the shores of the sea which was always its great highway and unifying factor; when colonies had been established from Gelonus in the Caucasus to Tartessus in Spain; when Alexander had carried its influence to the frontier of India, there began a decline, of which the first seeds had been sown in 427 B.C. by the revolution in Corfu. Accelerated perhaps by malaria, which seems to make its first appearance after the Persian invasion, and later helped, some think, by the intermingling of Macedonian blood, the decline continued, until "gradually, tower by tower," the battlements of Greece "fell, and there were none to rebuild them."

From an architectural standpoint we might have wished for more light upon that phase of Greek life which gave us the Stadium and the sacred enclosure at Olympia, and of that other which gave us the Theatre at Epidaurus. We might have asked for more insight into the mysteries and cults whose legacy we see in the ruins and treasures of Eleusis and Delphi; but the book will give us much that we can ourselves apply to these purposes, and help us better to understand this marvellous people, and the buildings they have left us, treasures which (as the poet Theognis wrote of a friend) will "live as a song for all who love music, living or yet to be, as long as earth or sun remain."

H. F. TREW.

*"Ancient Greece." By Stanley Casson. Fellow of New College, Oxford. Published by the Oxford University Press (Humphrey Milford). London. 2s. 6d. net.



THE PARTHENON.

*(From Stanley Casson's "Ancient Greece,"
by courtesy of the publishers.)*

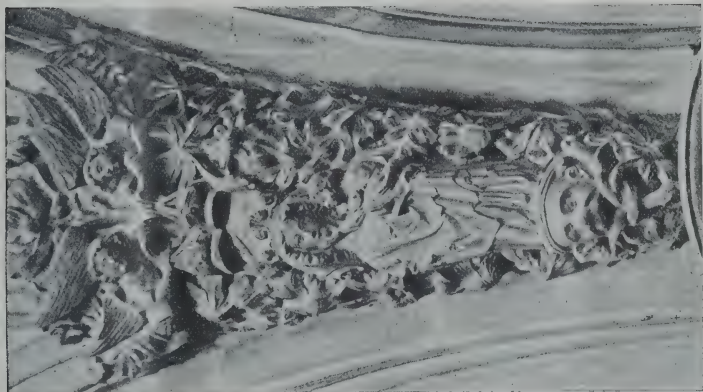


THE PLAIN OF SPARTA.

(From Stanley Casson's "Ancient Greece,"
by courtesy of the publishers.)



Some of the finest examples of English wall-painting may be found on the semi-domed apse of Copford Church (near Mark's Tey) Essex, illustrated above. The photograph is reproduced, by courtesy of the publishers, from Samuel Gardner's *Guide to English Gothic Architecture*, just reprinted by the Cambridge University Press, with a wealth of new illustrations (Sixteen Shillings net).



Both the corbels illustrated above are from Exeter Cathedral; that on the right from the choir, that on the left from the nave. The reproductions, together with that on the previous page, are taken, by courtesy of the publishers, from Samuel Gardner's *Guide to English Gothic Architecture*. (Cambridge University Press).

Correspondence.

THE MODERN OUTLOOK.

TO THE EDITOR OF THE S.A. JOURNAL.

SIR,—It is said that if you convince a man against his will, he's of the same opinion still. Your correspondent in the last issue of the *Journal* refers to my "interesting" article (in the May number) entitled *A Plea for the Modern Outlook*, which he is kind enough to call "reasoned" and then says it is founded upon a fallacious idea!

I am glad he takes this attitude:—

"For if it be but half-denied,
'Tis half as good as justified."

He credits me with saying that "Registration would protect architects"—I don't believe it! If your correspondent could tell me what an architect is, we might have some common ground for debate.

Is he the only man capable of careful consideration, for he says he hopes that when I consider the matter more carefully and "the detailed provisions of any well drawn Registration Bill" that my opinion will be (like his), that registration would protect the public against employing unqualified architects? What does he mean by "qualified"? How can I consider the "detailed provisions" of any such Bill? Why should I assume that the provisions would be "well drawn"? Registrationists are very solicitous about protecting the "public," but are they sincere? The public can always employ a good man if they wish—your correspondent for instance!

I have recently seen designs published and signed as follows:

Mr. X, F.S.A., architect, Mr. Y, F.S.I., architect, Mr. Z, A.M.I.C.E., architect. They are all possibly better men than an average A.R.I.B.A.; but what would be the effect of registration on them unless they could affix some other tag to their names?

It seems to be monstrous to expect the public to credit any unified body with being composed of the only architects worthy of the name, before that body has officially formulated a clean cut, unambiguous and complete definition of its pretensions. If the position were not so vague the various journals would not be afraid of giving publicity to interesting and reasoned articles on the subject. The editorial note in the June number of the A.A. Journal is right when it says that the "Association will best serve the interests of all concerned by avoiding politics and confining its activities to the promotion of architecture and architectural education." Yes, indeed. Education is more important than Registration!

So far, I must confess to not being capable of limiting the meaning of the word "Architect," nor have I yet seen, for legal purposes, any satisfactory definition. Perhaps your correspondent could help me in this matter.

If such a miracle as Registration were ever wrought, would Mr. X be prevented from building if he called himself an Archæologist? If Mr. Y employed a qualified architect as draughtsman would he be allowed to sign his drawings as Surveyor? Would it be illegal for a building to be erected from the designs of Mr. Z because he called himself an Engineer? If so, those who were legally entitled to the blessed epithet of Architect might become so terribly busy as to incite an organised campaign against their overbearing presumptions, and if not, what is the advantage of being able to call oneself an architect when "a rose by any other name smells just as sweet"?

The whole idea seems to me suicidal, for the public (the *dear* public) would

soon perceive that an Architect was, after all, not a necessary person to employ. Under registration architects would all be *real* architects. At present public opinion is sufficiently indulgent to allow the designation to live.

Comparisons have been made between the position of the doctor and that of the Architect, but there is no analogy. If a man employs an archæologist and the result is the erection of a learned eyesore, the offence to humanity, though grave, is not so serious as if he employs a quack and leaves his wife a widow!

It comes to this, that Architecture in the higher sense is an art, and in the lower sense a business. The public is protected from the business side by various existing laws. The twentieth century will probably want to protect itself from the art side by employing engineers.

A portion of the commercial element admitted into the fold as practising architects might favour registration, for it would probably seem to them good business! The busy man with a smattering of art takes as shibboleth "Architectural Education." What degree of education does he suggest imposing? Would he class all licensed architects as "*real*" architects? It must be admitted that the standard would have to be much lower than what is now necessary for the R.I.B.A. This being the case how could registration further architectural education?

Your correspondent points out that he passed the examination for Associateship of the Institute in 1882 on a much lower degree of competency than would achieve the result now. This shows that the standard, without legislation, is now higher and that there is nothing to prevent it from becoming higher still. The public is therefore being protected by education, and the architect is gaining in recognition.

I must thank you, Sir, in the interests of the art of architecture, for giving such prominence to my article which in some people's opinions might be considered to be directly opposed to the Society's interests. In this you show more than ordinary courage and a generous desire that the question shall be studied honestly and squarely from all points of view. As I have not the honour of being a member I beg to offer your Society my congratulations. You appear to me to realise that the interests of architecture are the interests of the Society. I fear there is much trickery on the part of many members of the profession, partly politicians, who nurture their schemes by trying to suppress disinterested criticism.

If my constructive suggestions do not coincide with the official prevailing policy they might nevertheless be given a fair hearing for they have been conscientiously framed and based on the principles existing in France, the only country in the world with a national organisation for the training of architects and consequently for the protection of the art of architecture.

I have lately been informed that the Bill, in France, which I mentioned in my article for the "Suppression of the Usurpation of Professional Titles" is now practically a dead letter.

In England, a national educational system would certainly lead to the national recognition of a standard; but would registration lead to one officially recognised Diploma? If so, would that mean the organisation of one centralised national school? If not, what would be the advantage?

As an "*arriviste*" I would vote for registration, as an Educationist it leaves me cold, as a practical man it makes me smile!

Yours etc.,

H. BARTLE COX.

Paris, June 20, 1922.

Half-Yearly Design Competitions.

It will be recalled that, as announced in the March *Journal*, two new Half-Yearly Design Competitions (each to the value of £40) were substituted for the old Quarterly Competitions. The new Competitions are open only to Licentiates and Students of the Society; the Jury of Assessors is that which controls all the Society's Competitions.

ASSESSORS' AWARD IN THE FIRST COMPETITION (1922).

Nine out of the ten successful competitors in the Preliminary Test (a list of whom appeared in the *Journal* for April, 1922), submitted designs in the Final Round. The drawings were numbered as received, and the Jury of Assessors, after long and careful study of the various designs, presented the following report to the Council.

We, the undersigned, being the JURY OF ASSESSORS in The Society of Architects' Competitions, have to-day inspected the designs submitted for the above Competition and recommend:

That a prize of thirty pounds be awarded to the author of the design marked No. 7, and one of ten pounds to the author of the design marked No. 1, subject to the conditions set forth in the Regulations.

Design No. 7 has been placed first on account of the plan which has fewer faults. The draughtsmanship is poor and the elevations somewhat ordinary.

Design No. 1 has been marked very low on the plan which is bad in many particulars and high on its draughtsmanship and elevations. Had the plan been good first place would have been awarded this competitor on account of the high qualities of draughtsmanship.

Design No. 9 is placed a close third.

Design No. 3 is placed fourth some way behind.

The remainder (designs Nos. 2, 4, 5, 6 and 8) are not marked.

The Jury is encouraged by the fact that the general standard of design and draughtsmanship shows an improvement.

L. SYLVESTER SULLIVAN,
THOS. WALLIS.
PERCY B. TUBBS.
HOWARD ROBERTSON.

The sealed envelopes were then opened and the identity of the Competitors disclosed as follows:—

No. 7, H. ANDERSON, Student, of Blean, Nr. Canterbury (Placed First); No. 1, H. SCOTT DALBY, Licentiate, of Weaverham, Cheshire (Placed Second); No. 9, E. K. RAINFORD, Student, of Hoylake, Cheshire (Placed Third); No. 3, R. H. SHREWSBURY, Licentiate, of Eccles (Placed Fourth); No. 2, STUART BEDFORD, Student, of Hove; No. 4, ALAN J. BIDDULPH, Student, of Birmingham; No. 5, LEONARD K. DYER, Student, of Portsmouth; No. 6, OSWALD H. GREEN Licentiate, of Truro; No. 8, COLIN A. BROWNE, Student, of Birkenhead.

PROCEDURE.

Each Competition is divided into two parts as follows:—

PART I.

A preliminary sketch design competition for which the subject will be set and the designs assessed by a jury who will designate a maximum of twelve competitors to enter for Part II. of the competition.

Fourteen days to be allowed for preparing the sketch designs.

PART II.

A final design competition of a more advanced character restricted to the twelve selected candidates.

Eight weeks to be allowed for preparing these designs.

The competitions are conducted, the subjects set, the designs assessed, and any awards made by the Jury of Assessors, who will arrange for a criticism of the designs.

Any awards made may be used by the winners for any architectural educational purpose approved by the jury.

The general regulations of the Society as set out in p. 144 of the 1922 Year Book must be observed in this Competition.

THE SECOND COMPETITION.

DATE OF THE SECOND COMPETITION (1922).

The Preliminary Sketch Designs for the Second Competition (1922) must be delivered not later than 6.0 p.m. on Tuesday, August 8th, and the Final Designs not later than the same hour on Monday, October 9th, 1922.

SUBJECT OF THE SECOND COMPETITION (1922).

The subject for the Preliminary Sketch Design in the Second Competition (1922) is a Memorial Tablet, which it is supposed an important commercial firm wishes to erect to its numerous employees who fell in the War.

A sports ground, is run in connection with the Firm's Welfare Department, and it is against the retaining wall to the terrace overlooking these grounds that it has been decided to erect the memorial, which will be in the shape of a Mural Tablet.

There is a difference in level of six feet between the terrace walk and the playing-field below, and communication is established by means of a double flight of stone steps which lead down from a point facing the centre of the clubhouse. The tablet will be placed at this point, and is to be designed in conjunction with the steps.

The exigencies of design may require that the top of the tablet should project above the terrace parapet, but as it is important that the views from the clubhouse should not be unduly obstructed, the limitation of such projection should be carefully kept in mind.

The existing wall is in brick with stone dressings, but metal may be introduced into the tablet if desired. The Memorial should accommodate 150 names, and though these need not be shewn on the drawing, their bulk should be evident from the proportions of the space allotted.

A half-inch scale elevation of the Memorial and steps is required, together with explanatory sections and, in one corner, a plan to eighth-inch scale. A full-size sample of the lettering used for the names should be given in a corresponding position in the other corner, the material being clearly indicated. The total length of elevation shewn, including the steps, should not exceed sixty feet.

The drawings must be executed in pencil and colour on a single imperial sheet, white or tinted, which should be sent unmounted.

The subject of the Final Competition (Part II) will be communicated to the selected Competitors in due course. That of the Preliminary Design (Part I), for the First Competition (1923) will be published in the *Journal* in the new year.

THE SOCIETY OF ARCHITECTS' REGULATIONS FOR ADMISSION TO THE EXAMINATIONS TO QUALIFY FOR CANDIDATURE FOR MEMBERSHIP, TOGETHER WITH THE SYLLABUS AND INSTRUCTIONS TO CANDIDATES.

As the object of any examination for admission to membership of a professional body should be to test the extent of a candidate's knowledge and qualifications, the Council considers that the Society's membership examinations should be of such a nature as to give candidates an opportunity of displaying their knowledge and qualifications to the best advantage, and that in certain cases an examination of the evidence of work executed from his designs as architect and of other testimonies of professional qualifications, experience and standing, with the addition where necessary of an oral examination, is a truer index of a candidate's qualifications than is obtainable by a scrutiny of written replies to theoretical questions.

The Council is of the opinion that the fairest system of examination for the purpose of testing the professional qualifications of candidates for the various classes of membership in the Society is one which provides for eligible candidates of the required age, seniority, experience and standing, to submit such evidence of qualification as the Council may require (see Clauses 1, 2a, 3 and 4), and for others eligible but less experienced or who prefer to take the theoretical examination and compete for the awards, a combined practical and theoretical examination with the addition of an oral test (see Clause 2b below).

The examination Diplomas and Certificates of kindred professional bodies, and of architectural and technical schools recognised by the Society, may be accepted in lieu of the whole or part of the Society's examinations as the case may be, at the discretion of the Examiners.

In order to encourage industry and reward merit, prizes of the value of £175 per annum, with gold, silver and bronze medals, are offered in connection with the membership (2b) examinations.

Methods of elucidating, examining and determining the qualifications of candidates for admission to the Society.

1 FELLOWSHIP. For practising architects over 30 years of age with at least ten consecutive years experience as Principals.

The examination by the Council of evidence of executed work, professional experience and standing, and of such other testimonies as may be required from the Candidate in each case. Entry form A.

2 MEMBERSHIP. a) For architects over 30 years of age with at least seven consecutive years experience as Principals, or 10 years as Assistants or as Assistants and Principals. *A similar method of examination as for the Fellowship. Entry form D.*

b) For architects between the ages of 21 and 30 or who, being over 30, prefer to take the Membership 2 (b) examination and compete for the awards. *Entry form 2 (b).*

Candidates work the examination papers at home, and return them to the examiners in London. The oral examination is held in London and in such other centres as the Council may decide. The system, method and procedure is set out on page 4 of the Syllabus, containing information and instructions for candidates.

3 LICENTIATESHIP. For persons over 21 years of age who are engaged professionally in architectural pursuits. *Entry form E.*

The examination by the Council of evidence of executed work and/or testimonies of study especially prepared or already prepared for other purposes by the Candidate.

4 STUDENTSHIP. For architectural students over 16 years of age.

The production of such evidence of qualification as the Council may from time to time require. Entry form F.

REGULATIONS FOR THE EXAMINATION OF CANDIDATES FOR MEMBERSHIP UNDER METHOD 2 (b).

EX-SERVICE CANDIDATES.—Due allowance will be made by the Examiners for interrupted studies or practice when considering evidence of qualification, whether practical or theoretical or both, from candidates who served in any of H.M. Forces between August, 1914, and November, 1918.

EXAMINATION FEES.—The fees for the Membership 2 (b) examination are £2 2s. for Licentiates and Students of the Society, and £4 4s. for other candidates.

If after payment of the fee a candidate withdraws or fails to present himself for examination, no part of the fee shall be returned to him, but the examiners may, if they think fit, allow such fee to apply to the next examination at which the candidate presents himself.

A relegated candidate will be charged half fees at the next examination for which he presents himself, and full fees at any subsequent examination, but a candidate will not be permitted to sit more than three times for the whole examination or for any part of it.

AWARDS.—The following prizes are offered annually in connection with the Membership 2 (b) examinations and may be awarded to successful candidates according to merit at the discretion of the examiners. The examiners may award or withhold during any one year all three prizes or any two or any one of them only. Candidates who are exempted from or relegated in any subject are not eligible for these awards, which are open only to candidates who pass in every subject at one sitting.

First Prize.—One Hundred Guineas, the Gold Medal, and (if elected) membership free of subscription to the best candidate of the year.

Second Prize.—Fifty Guineas and the Silver Medal in lieu of the First Prize, or in addition to it as a Second Prize.

Third Prize.—Twenty-five Guineas and the Bronze Medal in lieu of First or Second Prize or as a Second or Third Prize.

BOARD OF EXAMINERS.—The Examination Committee of the Society are the examiners, with the assistance of the following, who act in an advisory capacity:—

Professor A. E. Richardson, F.R.I.B.A.; A. J. Davis, F.R.I.B.A.; R. Atkinson, F.R.I.B.A.; Professor L. P. Abercrombie, M.A., F.R.I.B.A.; Henry Poole, A.R.A.; L. H. Bucknell, A.R.I.B.A.; Robert Lowry, A.R.I.B.A.

DATES OF EXAMINATION.—The examinations will be held during April and October of each year. The Council reserves the right to alter the date, or cancel or vary any arrangement made for the examinations, in which case the fees paid by candidates affected will be returned or credited to them as may be arranged.

DATE OF ENTRIES.—Entries must be made on the prescribed form and deposited at the Offices of the Society, 28, Bedford Square, London, W.C. 1, together with any certificates and/or testimonies of study, not later than March 1st and September 1st of each year, accompanied by the examination fee, which will be returned if the entry is not accepted.

EXAMINATION PAPERS.—The examination papers, and the necessary instructions, will be sent to accepted candidates on March 22 and September 22, and the worked papers must be deposited with the Society not later than November 3rd.

ORAL EXAMINATION.—Seven days' notice will be sent to candidates of the date, time and place of the practical test in Section V, subject D, surveying and levelling, and of the Oral Examination.

QUALIFICATIONS.—Candidates must be not less than twenty-one years of age and must produce such evidence of general education and Architectural training as the Examiners may require. See entry form 2 (b).

A candidate will not be admitted to the examination if engaged in any other calling than that of an architect or an architect and surveyor. The passing of the examination qualifies a candidate if otherwise eligible under the Regulations to make an application for membership, but his admission is subject to the approval of the Council and to election by ballot of the general body of members.

EXEMPTIONS.—The Examiners may at their discretion grant exemptions from the whole or part of the Society's examination to candidates holding certificates gained in corresponding subjects in other examinations, or producing such other evidence of qualification as shall satisfy the Examiners that the standard attained by the candidate is equal to that required by the Society. Claims for exemption must accompany the application to sit.

MINIMUM QUALIFYING PERCENTAGES.—For a Pass Certificate 50 per cent. of the marks in each subject must be secured. A Certificate of Merit or Honours respectively will be granted to each candidate who qualifies in every subject at one examination, provided he obtains an average of 65 per cent. or 80 per cent. of the total marks, as the case may be.

RESULTS.—The result of the Examination will be communicated to each candidate, but not the number of marks obtained.

NOTE.—Every reasonable care will be taken of drawings, testimonies of study, notes, sketches, certificates, photographs, and other documents deposited with the Society, but the Society will not be responsible for any loss of or damage to any drawings or documents, &c., which may occur either in transit or while in the custody of the Society. The owners must defray the carriage and all expenses incidental thereto to and from the Society's offices.

MEMBERSHIP (2b) EXAMINATION SYLLABUS.

Section I. ARCHITECTURE.

Subject	Marks.	
A	500	Architectural Composition, Details, and Design.
" B	225	Architectural History.
" C	225	Illustrated thesis, minimum 2,000 words, on some subject to be selected by the candidate and approved by the examiners.

Section II. BUILDING.

" A	220	Construction and Materials.
" B	150	Shoring and Underpinning.
" C	150	Mechanics of Building Construction.

Section III. SANITATION.

Section IV. PRACTICE.

" A	220	Specifications, Quantities, Prices, and Conditions of Contract.
" B	220	Setting out and Supervision of Works.
" C	220	Easements, Dilapidations, Building Acts and By-laws, Testing of Materials, Arbitrations, &c.

Section V. LAND SURVEYING.

" D	220	Land Surveying and Levelling, to include a practical test with the Theodolite, etc.
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Total 2,500

NOTE.—Worked answers to previous examination papers of the Society are not available.

INSTRUCTIONS FOR EXAMINATION CANDIDATES.

The system is a combined theoretical and practical examination under conditions approximating to private practice, supplemented by an oral test.

It is intended that the Candidate shall work the examination papers at his office or home, at his convenience (provided they are finished within the time allowed), as though they were problems arising in the ordinary course of his practice as an Architect.

The Candidate's worked answers in general and the oral test in particular will reveal to the examiners to what extent (if any) he has relied upon extraneous assistance, and evidence of any attempt to take undue advantage of the conditions and circumstances under which the examination is held will render the Candidate liable to disqualification.

Candidates are advised to make themselves fully acquainted with the Syllabus, the information and instructions to Candidates, and the requirements of the entry form 2b, and on receipt of the examination papers to scrutinize carefully all the questions in each paper before attempting to solve them. The time spent in getting a grasp of the scope and nature of the examination and of the questions, and the procedure generally, will be to the advantage of the Candidate.

The Society does not provide drawing paper, stationery, instruments, or other requisites for the examination.

The Examiners cannot enter into correspondence with the Candidates in regard to the papers.

Candidates must insert and fill in on every drawing and on each sheet of worked answers, in the top right hand corner, the following information:—S. A. Membership
(2b) Examination _____ 192 _____ Section _____
Subject _____, Index No. _____.

If the Candidate's name or any mark of identification other than the foregoing appears on the work submitted, the Candidate will be disqualified.

The drawings, if more than one, and the sheets of worked answers in each subject must be made up into separate sets, with an outer sheet containing the above information only, and each set fastened at the left hand top corner. Each sheet must be numbered.

Each written answer, preceded by the number of the question, must commence on a separate sheet of foolscap paper, and be written on one side of the paper only, leaving a left hand margin. They may be either hand or typewritten.

The worked answers and drawings, etc., may be deposited at the Society's offices, 28, Bedford Square, London, W.C.1, as soon as they are completed by the Candidates **and must in any case be so deposited not later than May 3 and November 3.** If not personally delivered and removed the carriage to and from the offices of the Society and all expenses incidental thereto must be paid by the Candidate.

Parcels must be endorsed "Examination Papers."

Certificates and testimonies of study, etc., submitted by the Candidate with his application to sit for the examination, will be returned to the Candidate. All worked answers, etc., will be retained by the examiners.

These instructions must be read in conjunction with the examination Syllabus, entry form, and form of "return," and a Candidate who fails to comply with any of the conditions or requirements of the Society relating to the Examination, will be liable to disqualification by the examiners.

Separate instructions will be issued in regard to the date, time and place of the practical test in Section V, Subject D. Surveying and Levelling and of the Oral examination.

All communications on the subject must be addressed to The Society of Architects at 28, Bedford Square, London, W.C.1.

The R.I.B.A. Council Elections, 1922.

The result of the voting is to make practically a clean sweep of the old Council, only four of whom have secured re-election. This is a victory for the minority party on the Unification and Registration Committee, who seek to reverse the order in which these objects are to be accomplished or attempted. Whether this will be the ultimate result remains to be seen. Judicious pruning may facilitate fruit-bearing, but whether it is wise to uproot the tree depends on the object in view. It is interesting to note that less than 50 per cent. of the R.I.B.A. members registered their votes even under pressure, which is a point to be borne in mind by those who advocate a *plebiscite* on the subject of unification in the hope of securing a representative expression of opinion.

Notes from the Minutes, June 15th, 1922.

SIR CHARLES T. RUTHEN.—The resignation of SIR CHARLES T. RUTHEN (Fellow) was received and accepted, as from May 17th, 1922.

CONDITIONS OF CONTRACT COST.—The Council has agreed that the Society, which is represented on the Joint Conference, shall make a contribution to the expenses.

EXAMINATIONS.—The examiners' reports showed that three candidates had passed the April Membership (2nd) Examination, of whom two had gained certificates of merit. The Committee have in preparation a Guide for the use of candidates, and a proposal to organise correspondence classes in design has been approved in principle by the Council.

COMPETITIONS.—It was reported that sixty-six entries had been received for Part I of the Victory Scholarship Competitions, and that centres had been organized in connection with the Architectural Schools in London, Liverpool, Glasgow, Cambridge, Sheffield and Leeds.

The Assessors had selected ten candidates to take part in the final competition on July 15th.

MR. ANDERSON'S selection of Rye and Canterbury as sketching centres in connection with his award in the Travelling Studentship Competition was approved, and the first instalment of the award was sent to him.

The Assessors' report on Part II of the first half-yearly Design Competition, 1922, showed that the prize had been divided between H. ANDERSON, Student of Blean, Canterbury (£30), and H. SCOTT DALBY, Licentiate, of Weaverham, Cheshire (£10); the designs of Messrs. E. K. RAINFORD, Student, of Hoylelake, and R. H. SHREWSBURY, Licentiate, of Eccles, being placed third and fourth in order of merit.

INVESTMENTS.—It was decided to invest £750 in 3½ Conversion Loan, £208 in War Saving Certificates, and £85 in 5% War Loan, the latter being earmarked for the Victory Scholarship Fund.

INDIAN BRANCH.—MR. GEO. H. WENYON, the President of the Branch, attended the Council meeting on his return from a visit to India, and received their thanks for his efforts in founding and launching a Branch of the Society in Bombay.

Meetings.

There will be no meetings of the Society during July and August. Notice of the next meeting will be given in the September *Journal*.

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New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.

The Modern Cotton Mill.*

BY ARNOLD WADDICAR.

The exact date on which the cotton industry was first introduced into this country is uncertain. One of the earliest references records that cotton yarns were being spun around Bolton in 1510; and it is generally assumed to have been established in the early part of the sixteenth century. The cotton industry is almost entirely confined to Lancashire and the neighbouring parts of Cheshire and Yorkshire, where the climate and working conditions appear to be best suited for cotton manufacture. The industry has steadily increased until at the present day it is the largest of the world's textile industries. Its success has to a great extent been made possible by such men as Hargreaves, Arkwright and Crompton, to name only a few; whose inventions placed hitherto undreamt of possibilities in the hands of the pioneers of the industry.

Before the days of machinery the cotton industry was a scattered one; being carried on entirely by hand in the homes of the people. It was customary in those days to find two or three looms in one house, operated by members of the same family, who, in many cases, were also the owners. Work was found for them by the merchants of the district in which they lived and worked. This was known as the "private system," and continued in force until the advent of the power loom in 1790, when it was gradually succeeded by the "factory system" under which the machines were housed in one building or factory.

**This Thesis was awarded the highest number of marks in the April, 1922, Membership Examination.*

The steam engine had not yet been invented, and the principal power available to drive the looms was obtained from water. It followed, therefore, that the early factories were built on the banks of streams or other similar position where the flow of water could be harnessed to turn the water wheels which were used to drive the machines. Many difficulties attended the use of this form of power. Even at first it was exceedingly difficult to obtain a site which, whilst having an adequate water supply, was at the same time situated in a district convenient for the workpeople, and having a suitable climate; but as time went on it became almost impossible to find sites which combined all of these varied conditions.

The machines were as yet only small; and owing to the limited power available it was only possible to have comparatively few machines in one building. The result was that the factory building of this period was small, low, and badly lighted. The height from floor to ceiling was never more than 8 feet; and in some cases as low as 6 feet.

The invention of the steam engine marked a great advance in this industry, although the people were not prone to realise it at the time. The site of the mill was not now restricted to the vicinity of flowing water, but could be built in any locality considered most convenient. The first mill recorded as being driven by steam power was erected in 1789 by Messrs. Boulton & Watt for a Mr. Drinkwater. Steam had, however, been used in mills prior to this date, but curiously enough only to lift the water which, as already stated, operated the water wheel.

Another important stage in this industry was reached in 1830, when the self-acting mule was invented by a Mr. Roberts. This machine was entirely power driven, and performed the whole operation mechanically.

Further inventions, including the ring spinning frame, brought the day when all the machinery was entirely power driven. This allowed the running of the machines to be considerably accelerated, and led in turn to a vastly increased output. It now became necessary to lengthen the machines in order to cope with the increasing production. This had far-reaching effects on the building itself, as for convenience the machines were now placed across the building; and with their increased length it was found necessary to increase the width of building in order to accommodate the new machines. An entire revision of the existing type of building followed, as it was found that with the increased width, the present heights or rooms did not allow of adequate lighting to the centre. The result was a far superior type of building in which the heights of rooms were considerably increased and greater attention paid to the area of windows.

The modern cotton mill is a wonderful record of progress; and when we journey through any of the important towns in Lancashire and see the great buildings entirely devoted to this industry which surround us on almost every side, it seems almost incredible that such developments could have taken place in so short a space of time.

The cotton mill of to-day consists of basement, ground floor and three or four upper floors.

The basement generally contains the cotton store, conditioning cellar and general warehouse, whilst on the ground floor is the card room and the attendant machinery. The upper floors are devoted entirely to spinning.

The heights of the various floors have undergone considerable changes in recent years. In a modern six storey cotton mill of the type at present adopted, the height of basement would be 12 ft.; ground floor, 16 ft.; the three upper floors, 13 ft.; top floor, 12 ft.

The exterior of a cotton mill is familiar to most people, being chiefly characterised by vertical piers and a considerable area of window space. There are, however, very few, excepting those whose lives are in some way connected with this industry, who are conversant with their internal working and arrangement; and as this governs to a great extent the general construction of the building, it will not perhaps be out of place to insert here a brief outline of the various processes through which the cotton passes before finally leaving the mill, and which must be considered when planning and constructing the building.

The cotton before being shipped to this country is pressed by hydraulic power into bales varying in weight from 200-700 lbs., and is received at the mill in this condition. On arrival the bales are placed in the cotton store, where they remain until required, when they are conveyed to the blowing or scutching room. Owing to the compressed state of the bale, the cotton is very closely matted together, and therefore requires loosening before any further process is possible. This is done by a machine known as a "hopper bale breaker," which opens the bale and partially loosens the matted cotton. The cotton is then conveyed in this state to the mixing room, where, as the name implies, it is mixed or blended for economical reasons or to obtain a particular quality or colour of thread. From the mixing room it goes through the following processes in the order given:—Scutching, carding, drawing, combing, slubbing, roving; after which it is taken to the spinning mule or ring spinning frame, as the case may be. This is the last process in a cotton spinning mill. From the spinning rooms the cotton is conveyed in baskets known as "skips" down the hoists to the conditioning cellar in the basement. There the skips are placed on bricks to keep them clear of the water which covers this floor; and allowed to "condition," or absorb a certain percentage of moisture, after which they leave the mill to be officially tested before proceeding to the weaving sheds to be woven into cloth.

In the construction of a modern cotton mill there are many points requiring careful attention; of these perhaps the following may be considered the most important as having direct bearing on the actual construction:—1. The site. 2. Materials. 3. The number and type of machines. 4. Prime motive power. 5. Fire prevention.

1. The Site.

A good site should have a good sub-soil; good roads and easy access for transport of materials to and from the mill; and be in a convenient locality for obtaining workpeople. The first point is exceedingly important, as upon it may depend the ultimate cost of the building. Providing the subsoil is good only the ordinary type of foundations will be required; but should the site be of inferior material it may be found necessary to sink concrete piles under the column and wall, or even to cover the whole site with a reinforced concrete raft in which case the ultimate cost of the building has been materially increased before any actual building has commenced.

2. Materials.

The question of materials is governed to a great extent by the various bye-laws and the rules of the Fire Office Committee, which must be adhered to if the building is to be accepted for insurance against fire, and which will be discussed later. Generally speaking, these regulations are that the materials throughout should be as fire-resisting as possible. This has resulted in three distinct types of construction, viz.:—(a) That in which the outer walls and piers

are of brick, the floors being composed of concrete reinforced with steel joists or patent reinforcement; and supported on cast iron or steel columns; (b) steel frame construction in which the whole building is supported on steel girders and stanchions; the exterior walls being carried by the floors and only serving to cloak the steel frame; and (c) reinforced concrete construction in which walls, floors, columns and beams are all of reinforced concrete.

It may be safely asserted that the first type has been generally adopted in modern cotton mill construction, and as such will be the type considered in the Thesis.

The second type is more familiarly known as 'the American system,' where it has been used extensively. The third type has not, up to the present, been adopted in many cotton mills; a few have, however, been recently erected on this system, and it remains to be seen whether they will prove better adapted for their purpose than the present type.

3. Machines.

Upon the number and type of machines depend the size of the various rooms; and in consequence this question should be one of the first to be settled. The number of the various machines are obtained by calculations based on the counts of yarn which the mill is going to spin. These calculations have already been adequately dealt with by many competent authorities, whose published works should be consulted for any information on this subject. Needless to say, the number varies in almost every mill, but the following table will serve to give the reader an approximate idea of the proportion of the various machines:—

Particulars of machines in mill containing 123,312 spindles (60's to 120's twist and weft, carded and combed):—

- 1 Hopper bale breaker.
- 3 Automatic hopper feeders.
- 3 Double openers.
- 5 Single scutchers.
- 170 Carding engines.
- 2 Silver lap machines.
- 2 Ribbon lap machines.
- 12 Combers.
- 39 Drawing frames.
- 10 Slubbing frames.
- 25 Intermediate frames.
- 71 Jack frames.
- 24 Mules on each of the four spinning floors.

4. Prime Motive Power.

Until recent years steam has been generally accepted as the most suitable power for mills in this country. Recently, however, several mills have been erected entirely driven by electricity, and have proved so successful that authorities consider it will gradually supplant steam in the cotton mills of the future.

The advantages of electric driving over steam are briefly the following:— Greater steadiness in running, less risk of breakdown, greater reduction in initial outlay if the current is obtained from town's supply as is generally the case; check on power consumed; machinery may be placed in any position; machines may be run independently if so desired; greatly reduced shuffling throughout mill.

The alteration to the building is considerable if electricity is adopted. The

boiler and engine houses can be dispensed with; and a motor tower substituted to contain the motor on each floor.

5. Fire Prevention.

The question of fire prevention is too large to be adequately dealt with in this thesis. It forms the basis of the whole construction of a modern cotton mill; and is the governing factor in the majority of decisions which have to be made in a building of this description.

The various ways in which a building may be attacked by fire are known as "fire hazards," and in the case of a cotton mill are chiefly the following:—(a) Excessive temperature. (b) Friction in machinery. (c) Spontaneous combustion. (d) Defects in electric or gas systems. (e) Carelessness of workpeople. (f) External causes.

Certain buildings constitute more various fire risks than others. The cotton mill is one of these, and in order that the mill may be insured against fire on favourable terms it is necessary that certain precautions should be taken. These are stated in the rules of the Fire Office Committee, and will be quoted at a later stage, when dealing with the various details of construction to which they apply. The following extracts, however, are now given as having direct bearing on the general construction, as follows:—

The height must not exceed four storeys and cellar; the ceiling of which must not be more than 3 ft. above the lowest point of site.

The superficial area of any department must not exceed 25,000 square ft., excluding area of window recesses and doorways.

The height of any room, excepting cellar, must not be less than 12 ft. from floor to ceiling. External and party walls to be of brick, terra cotta or cement concrete, and to be not less than 13 ins. thick at any point, or 20 ins. thick in the case of concrete.

If stone is used, it must have a backing of at least 13 ins. of brickwork.

The total area of openings in an external wall of any storey must not exceed one-half the area of wall.

Floors may be of brick arches, terra cotta, fireclay, or concrete, not less than 6 ins. thick, and carried on metal joists, girders and columns, or brick walls and piers.

Roofs must be entirely of incombustible materials as described for floors, but with a minimum thickness of 4 ins. in lieu of 6 ins.

Columns, stanchions, girders, joists, lintels, etc., should be adequately protected with brickwork, porous terra cotta or cement concrete.

All staircases, hoists, rope races, etc., to be external to the four walls of building and constructed of brick or cement concrete at least 9 ins. thick.

All openings to building from staircase to be protected by a fireproof door.

If the aggregate area of two or more compartments exceed 25,000 square ft. they must be divided by a fireproof passage at least 6 ft. long, with fireproof doors at each end.

Adequate automatic fire-alarm and sprinkler installation must be provided, the water for which must be supplied from two independent sources, both of which must be automatic and always available, and from any of the following sources:—

1. Town main.
2. Elevated tank or private reservoir.
3. Pressure tank.
4. Pump.
5. Injector apparatus and
6. Elevated private reservoir.

The town main and elevated tank are the two generally adopted in the majority of cotton mills.

The elevated tank should be fixed with its base at least 15 ft. above the highest sprinkler head. In order to obtain this height, the staircase enclosure is generally carried up in the form of a tower in which the tank is placed. The capacity of the tank is governed by the number of sprinkler heads, and varies from 5,000 gallons where the number of sprinklers do not exceed 150, to 7,500

gallons where not more than 200 sprinklers are used.

Closely allied to the question of "fire prevention" is the means of escape in case of fire. These are governed by the provisions of the Factory and Workshops Act of 1907, which require that in each factory where more than 40 persons are employed such means of escape in case of fire shall be provided for the persons employed as can reasonably be required in the circumstances of each case.

In a modern cotton mill there are generally two or more external fire escapes provided according to the size of the building, in addition to the internal staircases. External fire escapes should be of iron and constructed throughout on dead bearings. They should deliver into a public thoroughfare or other open space at the ground level.

All exit doors on to the fire escape should open outwards, and in the case of windows should have metal frames filled in with fire resisting glazing.

The fire escapes should also deliver on to the roof of the mill, in which case a separate means of descent to the ground should also be provided.

In describing the various details in the construction of a modern cotton mill the subject covers so large a range that the only convenient way of presenting it is to divide the building into sections and treat each section individually.

6. Foundations.

The safety and stability of the whole building relies to a great extent upon adequate foundations being provided, and in consequence they should receive very careful consideration at the hands of the architect, for no matter how well the remainder of the building is constructed it is less than useless if the foundations should prove unequal to their task.

Foundations are placed under the column and walls, through which the whole weight of the building is transmitted down. Their object is to distribute this load over a considerably larger area, and so reduce the load per square foot to within the safe limit of the bearing soil. In the majority of cases the foundations need only be of ordinary concrete; but if the sub-soil should be inferior it may be found necessary to adopt reinforced concrete in the form of grillage or pile foundations.

The size of foundations is governed by the bearing capacity of the sub-soil; which should first be ascertained by having trial holes dug in various parts of the site (preferably where the column foundations will be) in order to obtain the exact nature and composition of the strata.

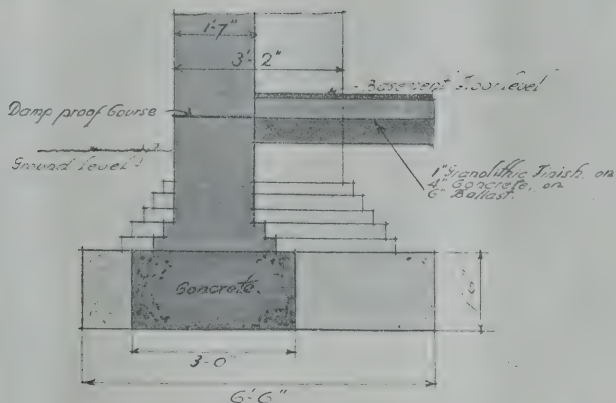
To obtain the size of pier and column foundation the total load in tons transmitted from above should be calculated, and this divided by the safe load in tons per square foot which the sub-soil is capable of bearing. The result will give the area of the foundations required.

Figs. 2 and 3 show typical sections through column and wall foundations for a six storey mill.

7. Walls, Piers, &c.

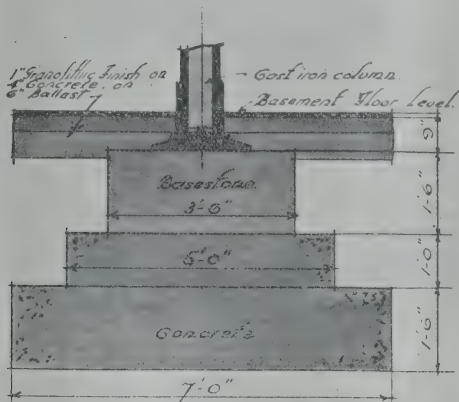
In accordance with the rules of the Fire Office Committee the external party and internal walls and partitions of a cotton mill should be composed of brick, terra-cotta and (or) cement concrete. Brick has been adopted in the majority of modern cotton mills as being most suitable. There are several reasons for this. Bricks are manufactured in practically all the large towns in the North, and so can generally be obtained within a comparatively short distance of the site, thus reducing the cost of transport considerably. In ordinary times they are the

Fig. 2.



Typical Section Through
Footings of Main Wall.

Fig. 3.



Typical Section Through
a Column Foundation.

cheapest form of building material available, their size allows of convenient handling and quick erection, and when built in cement mortar they form a good fire resistant.

The size and thickness of walls and piers, etc., depends, of course, upon the load they have to support and the character of the brickwork adopted. The exterior wall of a six storey cotton mill recently erected in Lancashire shows the piers are four bricks thick in the basement, $3\frac{1}{2}$ bricks in the card room, three bricks in the 1st and 2nd spinning room, and $2\frac{1}{2}$ bricks for the remainder. The spandril wall between the piers is $1\frac{1}{2}$ bricks thick on all floors except the basement, where it thickens out to two bricks.

The thickness of the pier at any point is obtained by calculating the total load in tons to be supported above that point, and dividing by the safe load in tons for the character of brickwork adopted. This varies from 5 tons per square foot for ordinary brickwork in cement mortar to 12 tons per square foot for blue brick in cement mortar. The result obtained will be the required area of pier in square feet at the point in question; from this the thickness may easily be ascertained, and in the case of isolated piers should be at least 1-12th of the height.

The brickwork should be carried up at least 3 feet above the level of the roof in the form of a parapet wall, and finished with a stone coping, as shown in Fig. 8.

8. Floors.

Before the introduction of cast iron and rolled steel beams mill floors were constructed entirely of wood. This type of floor was exceedingly inflammable, and quite unsuited for mill construction.

With the advent of cast and wrought iron a new type of floor was adopted consisting of main beams of cast iron, which supported small wrought iron joists, on which segmental brick arches were built. The extrados of the arches were filled with concrete, and the whole brought to a level surface on which the floor boards were laid.

At the time the floor was considered "fireproof," but several fires have proved this assumption to be far from correct. Under the action of fire the main cast iron beams became exceedingly hot and cracked when water was applied in any force, the small wrought iron joists expanded and buckled, causing the brick arches which they supported to collapse, bringing the entire floor to the ground in ruins.

There are, however, a great many of these floors in existence to-day, and they are still accepted under the rules of the Fire Office Committee.

The question of suspended floors has received considerable attention during recent years, and has resulted in two types of floors being adopted as most suitable for the requirements of a modern cotton mill. These are: (a) Concrete with steel joist reinforcements and (b) Concrete with "patent" reinforcements.

There are several variations of type "a"; but they are practically all the same in general principle the difference being in certain details, such as "finishings," etc.

One of the best examples of this type of floor, and one used extensively in modern mills, is shown in Fig. 4.

This floor consists of 8 ins. of coke breeze concrete reinforced with 4 ins. by $1\frac{3}{4}$ ins. by 5 lbs., or 3 ins. by $1\frac{1}{2}$ in. by 4 lb. R.S.J.'s, according to span. The small joists are placed at 18 ins. centres, and rest on continuous angles rivetted to web of main rolled steel girders.

Fig 4.

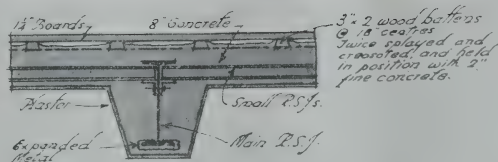
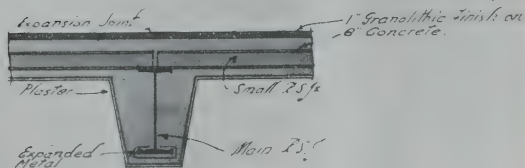
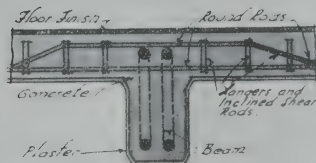


Fig 5.



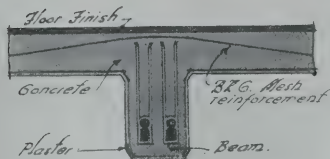
Types of Concrete-steel Floors

Fig 6



"Hennabique"

Fig 7.



"B.R.G."

Types of Reinforced-Concrete Floors

The finish is composed of $1\frac{1}{4}$ in. floor boards, on 3 ins. by 2 in. wood battens at 18-in. centres; the battens should be twice splayed and creosoted before being fixed. They are held in position by a filling of fine concrete which should preferably be kept $\frac{3}{4}$ in. below underside of floorboards to prevent rotting.

This floor is generally used in the spinning rooms. A variation of this floor is shown in Fig. 5.

The same type of floor is used for the card room, but owing to the heavy machinery on this floor the finish is composed of 3 in. flags on 2 in. sand.

The basement floor is generally composed of 1 in. granolithic finish on 4 in. concrete on 6 in. ballast.

As there are about 200 different forms of the "patent" reinforced floor, to attempt to describe them in detail would require more space than a Thesis of this dimension permits. They are practically all manufactured by "specialists" in this branch of construction, and are divided into two distinct types, viz.: (a) in which the reinforcement consists of steel bars, rods, etc., and (b) in which mesh reinforcements are used. Fig. 6 shows an example of the former, and Fig. 7 of the latter.

9. Roofs.

The old type of timber and slate roof, still to be seen in many existing mills, has been abandoned in modern construction, and the concrete flat substituted.

There are several advantages in adopting the concrete flat. It is essentially of fire resisting materials as compared with the inflammable nature of the timber roof; it affords protection from external fire hazards; and facilitates erection by following the same construction as the floors below.

Fig. 8 shows a type of roof usually adopted.

As may be seen, the general construction is identical with the floor construction previously described and differs only in the thickness and the "finish," which in this case is composed of a fine skimming of cement and 1 in. of good natural rock asphalt.

The asphalt should be of approved manufacture, and laid in two $\frac{1}{2}$ in. thicknesses, with joints properly crossed and seared. To prevent the asphalt from cracking the concrete should be haunched at the junction with the parapet wall at an angle of 45 deg. up, which the asphalt should be carried and the ends tucked into joints of brickwork.

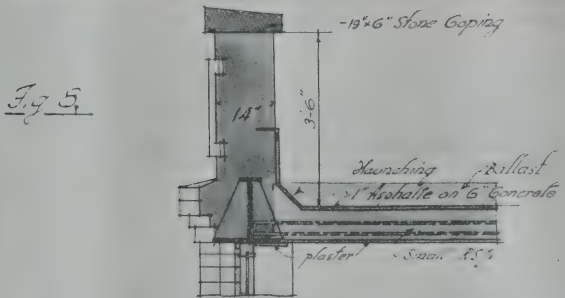
The surface of the asphalt should be protected from extremes of temperature; this may be done, as shown in Fig. 8, by a covering of 6 in. of ballast; or by having standing outlets from the flat, and so allowing 3 in. to 6 in. of rain water to remain on the flat as protection.

10. Columns.

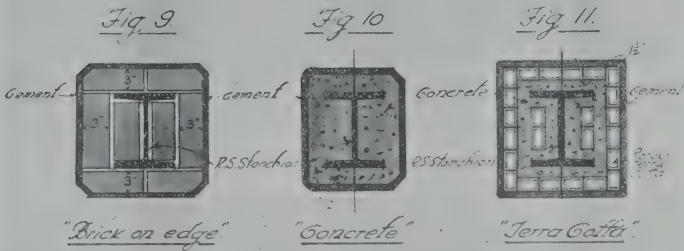
Columns are used as supports to the ends of floor and roof beams. They may be of cast iron, rolled steel or reinforced concrete, according to the type of construction adopted.

Cast iron has for many years been used in the construction of columns. Its chief advantage appears to be the facility this metal affords for casting brackets, ears, etc., on to the column to receive gearing, etc. In case of fire, however, there is always the risk of cracking should cold water be applied in any force to the heated metal.

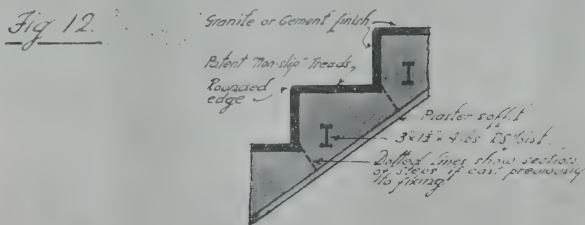
Much has been said in the past on the risk attending the use of cast iron columns, owing to the uncertainty which always exists as to the metal being of a uniform thickness when cast in a horizontal position.



Typical Section through Concrete Slab



Types of Stanchion Protection.



Typical Section of Concrete Step.

The arguments put forward are sound in principle. It is, however, a fact that for a considerable number of years cast iron columns have been used extensively in the majority of Lancashire cotton mills and with unqualified success. This argument would appear, then, to be slightly over-rated. To ascertain the correct thickness of metal the columns should be drilled before being fixed. As in the case of brick piers, so the diameter of columns and thickness of metal vary in ratios to the load supported, but for a six storey cotton mill the columns are generally $8\frac{1}{2}$ to 8 ins. diameter in the basement, reducing on each floor to 6 to $5\frac{1}{2}$ ins. on the top spinning room, with a corresponding diminution of metal from 2 ins. in the basement to $\frac{3}{4}$ in. on the top spinning floor. No such risk as those just described attend the use of rolled steel joists as stanchions.

Rolled steel, however, is not fire resisting unless "protected." It is therefore important, especially in the case of a modern cotton mill, that adequate protection should be provided.

This protection, according to the rules of the Fire Office Committee, may be in the form of concrete, brick or terra cotta; examples of which are shown in Figs. 9, 10 and 11.

Reinforced concrete columns if used should have the steel reinforcements protected by 3 ins. of concrete, 2 ins. at least of which should be coke breeze.

Staircases, Hoists, &c.

In case of fire, it will most probably be found necessary to use the staircases as means of escape. It is therefore important that certain details should be observed in their construction and planning. These are contained in the Building Acts, the Factory and Workshops Acts and the rules of the Fire Office Committee, which state that:—

Internal staircases should be placed outside the walls of main building, and enclosed by walls not less than 9 ins. in thickness.

They should be constructed of incombustible materials not less than 6 ins. in thickness.

The steps should be solid, square or spandril, and supported at both ends on the brickwork.

The staircases should be properly lighted and ventilated by windows, and a handrail fixed on both sides.

Where the staircases may be used as means of escape by not more than 200 persons they should be not less than 3 ft. 6 ins. in width, and not less than 4 ft. 6 ins. if used by more than 200 persons, or more than 100 persons on any one floor.

The staircases should be arranged in straight flights, without winders.

Each flight should consist of not more than 15 steps.

Landing spaces, not less than 2 ft. 6 ins. wide, should be provided between the steps of the flights and the escape doorways leading to and from the staircases.

The escape doorways should be of incombustible material, and if folding should open outwards.

Stone was at one time considered the most suitable material for steps; but it has been found that under the action of fire it is liable to disintegrate, and has been abandoned in modern construction in favour of concrete.

A good example of this type of steps is shown in Fig. 12.

The step is composed of cement concrete (6 to 1) reinforced with a 3 in. by $1\frac{1}{2}$ in. by 4 lbs. rolled steel joist. The tread is finished with a "non-slip" surface, and has a rounded edge.

Hoists should not be placed near escape staircases, and should not be in

anyway directly connected with same by means of openings or otherwise. They should be enclosed for the total height with incombustible materials, and fitted with fire resisting doors or shutters.

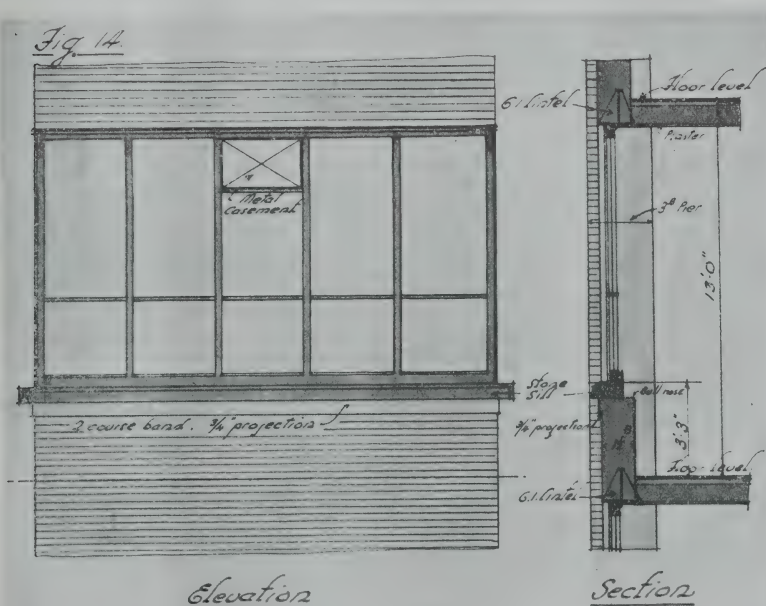
Windows.

Considerable changes have taken place in the construction of mill windows during recent years.

In the first place the area of glass has been considerably increased. This has led in many cases to the windows being built in outside reveals, as with the increased size many consider there is the risk of the window being blown into the room by outside pressure from wind, etc., if built in from the inside. Fig. 14 shows the frame on the inside, and many have been securely fixed in this way.

The stone sills are still retained, but the brick arches have been abandoned in favour of cast iron lintels. These are a great improvement allowing of greater scope in the elevation, and at the same time being better construction. Centre hung metal casements now take the place of the cumbersome wood hoppers.

Steel windows have been used in several modern cotton mills. They are, of course, far superior to wood from the fire-resisting standpoint, but their cost has up to the present prevented them being adopted in the majority of cases.



Typical example of Modern Window Construction.

Doors.

Doors are an important item in modern mill construction, as preventing the spread of fire from one department to another.

Under the Factories and Workshops Acts and the rules of the Fire Office Committee it is necessary that the various departments of a cotton mill should be adequately cut off by means of "fireproof" doors.

There are several types of doors available, including wood doors, metal covered doors, iron and steel doors, concrete and steel doors, patent fire-resisting doors.

Where wood doors are used they should be constructed of oak, teak or jarrah at least 2 ins. thick and hung on solid frames. As they form only a "temporary protection," however, they should not be used in "the main" building.

Metal covered doors consist of tinned steel, or iron sheets; screwed or nailed on to $\frac{1}{2}$ in. boarding. They are very commonly used in mill construction, but are heavy and clumsy, and in case of great temperature the gases arising from the boards are liable to force open the joints of the sheeting.

Iron and steel doors are constructed of wrought iron or steel plates not less than $\frac{1}{2}$ in. thick. They are, however, liable to buckle when subjected to great heat.

Concrete and steel doors are constructed of T iron frames with either flats or rods, and the inside filled in with concrete. Their greatest asset appears to be the non-radiation of heat, but they have not been used very extensively up to the present.

There are several types of patent "fire resisting" doors on the market at the present day which are accepted by the Fire Office Committee, who stipulate that these doors must not exceed 5 ft. in width and 7 ft. in height, and the opening for same must not be more than 35 superficial feet. In the case of metal doors, etc., the area of opening must not exceed 56 superficial feet and the size 7 ft. wide by 9 ft. high. If any opening exceeds 3 ft. 6 in. in width the door shall either be of the sliding type or in two equal leaves if of the hinged type.

As the object of this Thesis is to deal with the various forms of material and details of construction which the architect is required to be conversant with in modern cotton mill construction, such items as heating, lighting, ventilation and driving machinery have been omitted as not coming within the scope of a treatise on the actual construction of the building.

Competition Banned.

Members are requested not to take part in the Crown Brewing Company (Bury) Competition without first ascertaining whether the conditions have been approved by the Society.

Assistant Architect South Indian Railway.

Members (in any class) of the Society over 26 years of age who may desire to apply for this vacancy can obtain particulars from the Secretary at 28, Bedford Square, W.C. 1.

Meetings.

There will be no meetings of the Society during August. The date of the next meeting will be announced in the September *Journal*.

The Resignation of the Architect.*

BY A. H. M. BRICE, BARRISTER-AT-LAW.

The Architect is the agent of the building owner, and just as the owner may at any time revoke the authority entrusted to his agent, so may the architect at any time renounce his agency for the owner.

But whether he can do this with impunity depends entirely upon the circumstances.

In the first place, the usual form of contract between the owner and the architect seldom provides for the resignation of the latter. If it does, the action of the architect ought to be guided by the express terms of the contract, and his position, at any rate, will depend upon those terms. If it does not, the architect's position remains that of an agent and is subject to the general law of agency.

The authority of an agent is determined *inter alia* (1) by notice of revocation given by the principal to the agent, and (2) by notice of renunciation given by the agent to the principal.

It is well settled that a contract of agency may be determined at will in the absence of an agreement, express or implied, to the contrary. It is also clear that no agent is liable for the mere non-performance of that which he has undertaken to do gratuitously. He has simply made a promise which he has not kept; no action will lie for that, for there is no consideration passing to him and he has no interest in the subject-matter.

This, however, seldom applies to the architect. As a professional man he renders services for a valuable consideration, and every architect who enters into an undertaking for valuable consideration is ordinarily bound to perform that undertaking. It is his duty to follow strictly the terms of his authority and to obey the lawful instructions of his principal. If, therefore, he has entered into a contract to design and superintend the erection of specified works, and, without reasonable and sufficient excuse, should decline to proceed with that duty, the building owner would have a claim against him for the breach of contract. The owner could not compel the architect to proceed with the work he had agreed to do, because the Courts will not grant a decree for specific performance when it is solely a question of personal services, but the owner has a claim for damages. The damage which he might suffer would represent the loss actually sustained by him as a natural and probable consequence of such breach of contract, and it seems obvious that this actual loss would in most cases not be serious, and in some instances be negligible.

In any case the architect should give notice to the owner of his intention to cease acting, and such notice, if of reasonable length, might and in many instances would lessen any damage that could arise. I would also point out that if the contract is for fixed and periodic terms of service, as occasionally may happen, such as from quarter to quarter or year to year and not for the completion of a specific undertaking, the notice to be given should be in accordance with the notice usually given in other

* The Editor has received from time to time enquiries from members as to the legal consequences of an Architect resigning from the work he has undertaken to do. The point does not appear to be dealt with in Mr. Brice's paper on "The Legal Liability of an Architect," published in the Society's Journal in January, 1908, and Mr. Brice has very kindly acceded to the Editor's request that he should amplify his paper by a brief reference to this subject.

circumstances—that is to say, either a quarter's or six months' notice. In this case such notice would protect the architect from any claim for damages. But where he has agreed to begin or carry on and complete a definite work, he is not usually at liberty to renounce his agency before such completion without rendering himself liable to an action.

On the other hand, it must always be remembered that if the building owner, by committing breaches of the contract or by unreasonable behaviour cutting at the root of the contract, renders it impracticable for an architect to carry out his part consistently with the retention of his authority and the usage of the profession, then it is open to him to renounce his agency without notice and prefer a claim against the building owner for the damage suffered by being thus prevented from continuing the work and earning the remuneration agreed upon in the contract. He would have a claim to remuneration not only for the work already done (and not yet paid for), but also for the work he has been wrongfully prevented from doing.

Unification and Registration.

The Council of the R.I.B.A., at its meeting on July 3rd, 1922, passed the following resolutions:—

1. That this Council considers the scheme of the Unification and Registration Committee is contrary to the best interests of the public, of architectural education and practice, and the Royal Institute of British Architects in particular, and is of the opinion that the Committee should be dissolved.
2. That each member of the Unification and Registration Committee be thanked for his services, and his appointment cancelled.
3. That a Committee be appointed of members of the R.I.B.A., with power to add to their number and to co-opt, if necessary, non-members of the R.I.B.A., and to obtain expert advice, to draft a Registration Bill with a view to its being deposited in November, 1922.
4. That a small Committee be formed to consider the revision of the Charter and By-laws, and to report to the Council at the earliest possible date. The Committee to have power to add to their number and to take expert advice. The new Charter to provide for equal voting powers for all corporate members, &c. A note to be inserted in the *Journal* asking members to send any suggestions to the Committee.

In view of the fact that the Unification Committee has not made a final report, the first two resolutions must be considered merely as futile and ineffective expressions of opinion and action on the part of one of its constituent bodies.

The proposal to obtain expert advice in drafting a Registration Bill is made in view of the face of a statement by the R.I.B.A. Defence League on October 4, 1921, that an eminent firm of Parliamentary agents had advised that it would be impossible to obtain legislation on the lines proposed, and shows that the R.I.B.A. Council considers that a case can be presented in such a form that an expert acting within the limits of his brief cannot do otherwise than give an inspired opinion.

In our view some form of Unification is essential as a preliminary to Registration, but the necessity for the amalgamation of the Society with the Institute in order to obtain that end is another story. It was with a view to avoiding some of the delays and difficulties which have arisen that the Society in the first instance made the suggestion that Unification, so far as the Society is concerned, should take the form of Federation.

For a long time past representatives of these two bodies have been and are still working together harmoniously on Joint Committees on several matters of general professional interest and importance, so that the principle of Federation is already

established and a precedent set which might be extended to the Registration question with great advantage of all concerned.

If this procedure is foreshadowed in the third R.I.B.A. resolution all may yet be well, and those members of the Society who for the last fifteen months have devoted much time, energy and thought to the subject under discussion will not grudge their labour if in the end the Society's object is achieved.

There will probably be a large measure of agreement with the views expressed by Mr. McArthur Butler, Secretary of The Society of Architects, in the letter which we print, especially with his observation that it is very unusual for a committee to be discharged before it has made its report, and that, if in the opinion of the Institute Council the Unification and Registration Committee should be discharged at this stage of the proceedings, the proper course is for the Committee to be called together to consider the views of the Council of the Institute on the subject. We have consistently urged that the Committee should have been allowed to report, and should not have been discharged before it had completed its work, but this is not the view of the new Council, which has resolved that the Committee shall be dissolved. Mr. McArthur Butler now makes the point that the action of the Council in cancelling appointments on the Committee made by other constituent bodies is "ultra vires" and that it has no power to do so. We do not see how the Committee could have carried on its work bearing in mind the recently expressed opinion of the electorate, incomplete as that was, but because of its incompleteness we wish the new Council had submitted the questions at issue to the electorate by means of a postal vote.—*The Builder*—July 14, 1922.

Standard Form of Building Contract.

Negotiations between the Royal Institute of British Architects, the Surveyors' Institution, The Society of Architects, the National Federation of Building Trades' Employers, and the Institute of Builders, which have been proceeding for some time with a view to the preparation of a standard form of contract for building operations, have reached their final stage.

A drafting committee is already at work on the contract documents, and all matters on which the parties fail to reach an agreement will be referred to arbitration by a tribunal of appeal, consisting of representatives of the builders and the architects, under the chairmanship of Sir William Mackenzie, president of the industrial court.

If members of the Society who have any suggestions to make will communicate them to the Secretary at 28, Bedford Square, W.C.1, they will be scheduled for consideration by the Society's representatives on the drafting committee.

Courage in Colour.

It is interesting to note that the ideas which were developed at the Woman's Exhibition at Olympia last month by Mr. R. G. Lovell on the influence of colour, originated with The Society of Architects nine years ago, when Mr. Lovell dealt with the subject in a manner which resulted in a wide-spread publicity being given to it as a matter of public importance.

The Architect, the Consumer, and the Producer.

Last November a conference was held at Indianapolis, Indiana, between the Board of Directors of the American Institute of Architects and representatives of the Building Materials Producers of the United States, under the Presidency of Mr. Henry H. Kendall, the President of the American Institute of Architects. The problem under discussion was how to prevent the great economic waste inherent in the present methods of publicity, and if possible to arrive at some method whereby building products might be presented to the architect and his client in some mutually helpful manner.

The endeavour of the Committee on Structural Service of the American Institute of Architects, to improve the standard of service rendered by the architect on the technological side of his practice embraced the provision of channels through which might be conveyed to the architect information relating to structural methods and materials.

In this connection Mr. Sullivan W. Jones of New York took the view that the money spent on the sale of materials, including advertising, was the money of the consumer who not only contributed to the cost of selling him the things he bought, but also to the cost of the effort to sell him the things he did not buy. It would be a new thought to many manufacturers and architects that the architect had any responsibility in this connection, but the architect held a dual position as purchasing agent and manufacturer's salesman, and part of the money spent to reach the architect was his client's money.

Mr. O. C. Harn, National Lead Company, New York, speaking as an advertiser, suggested that a piece of merchandise was of greater importance to the buyer than to the seller. With building materials, a sale might mean only a very small item to the seller, but to the architect it might mean the success or failure of a building, so that any legitimate effort made by the seller to bring to the attention of the buyer the merits of that piece of merchandise was a favour to the buyer just as much as to the seller. It was for the architects to tell them what they required and the producers would conform, because it was in their interests to do so.

Mr. Lyman Clark, of the General Electric Company, Schenectady, thought it was a mistake for the architect to stand aloof from such material things as advertising, and look upon those who dealt with the manufacture of materials as being outside his sphere, and if architects did not rectify it, the builder ultimately would be the architect because he met the manufacturer and the advertiser on common ground and was therefore more familiar with the materials than was the architect. He thought there must be some basis upon which architects and manufacturers could get together for their mutual benefit, and he hoped that some day the architects would open the doors of their organisations and admit as Associate members all who were associated in the industry represented by their organisations.

Mr. Robert D. Kohn, second Vice-President, American Institute of Architects found it difficult to get at the facts in regard to manufactured articles and suggested the formation of a permanent Committee representing architects, manufacturers, engineers, and others interested in building products, to work out a scheme whereby the true merits of the different products might be adequately presented to the architect. He referred to the work of the Post-War Committee of the American Institute of Architects which in its final report expressed the view that the architectural profession by itself could not solve its own problems, it must work co-operatively with all the other elements in the industry. The problem of the manufacturer presenting information in such a form that the architect could readily appreciate and use it was all part of a larger problem of bringing together the producer, the distributor, the user, and the architect.

Mr. E. H. Hewitt, Director, American Institute of Architects, Minneapolis, referred to his experience in endeavouring to deal with the flow of advertising matter into his office, where he had a filing system twenty feet long and still growing, and it was impossible for architects to know all the merits and particular features of the thousand and one things manufactured for use in building. What they wanted was some system of elimination.

Mr. D. K. Boyd, American Institute of Architects, Philadelphia, referred to the Niagara of information pouring into architects' offices, and showed the difficulty of installing an adequate filing system for a year's inflow of manufacturers' literature, which occupied on an average ten linear feet of shelving.

Mr. R. C. Scheeler, of the John Lucas Company, said it would greatly help the paint industry if they had some standardised form in which they could present data to architects, and Mr. Fred Adam, of the Frank Adam Electric Company, St. Louis, suggested a national convention of architects and manufacturers, at which an exhibition of products could be arranged.

The question of organisation was then considered and a Joint Continuing Committee was formed of architects and manufacturers to study the problem of reducing the waste of advertising to architects, and to collect accurate information on building materials and appliances, with their appropriate use, the architect members of the Committee to prepare a statement defining the form and character of advertising which would meet their needs and submit it to the manufacturer members for their consideration.

It was decided to ask the American Institute of Architects Committee on Constructional Service to submit a questionnaire on filing systems to a list of selected architects with a view to the production of a standardised system of filing.

Representatives of the professional journals made some interesting observations on the subject, Mr. Sly pointing out the tremendous undertaking involved in endeavouring to educate 14,000 manufacturers in the preparation of their literature.

Mr. C. H. Whittaker, Editor of the American Institute of Architects Journal referred to the difficulty of maintaining the inviolability of the editorial pages of a professional journal that carried advertising, and whose function was to present information useful to architects, but sometimes counter to the business interests of advertisers. The only possible course was to give no editorial publicity of any kind to anything. Such a rule was wrong, because some of the publicity was very desirable, but the difficulty was to know where to draw the line. Advertisers ought to respect this editorial inviolability, and he hoped that the Committee in its deliberations would give consideration to the difficulties of editors who were beset with requests for notices.

An Executive Committee of five was formed in connection with the Continuing Committee, and the Chairman was authorised to discuss with a specified list of manufacturers the question of filing equipment, after the Standard Classification had been so revised as to embody any valuable features arising out of the replies to the questionnaire sent to selected architects.

It transpired that 150 of these questionnaires were sent out, and that up to the 1st of February, 1922, seventy had replied, and from the statistics received it would seem that, eliminating the offices using the Standard Classification, the success or otherwise of other filing systems depended not so much upon their character or classification as on their maintenance by someone possessing intelligence and a knowledge of building materials and their uses.

Correspondence.

TO THE EDITOR OF THE S.A. JOURNAL.

BUILDING ARBITRATIONS.

SIR—In his interesting paper on Building Arbitrations in your June issue, Mr. A. E. Munby, F.R.I.B.A., suggests that the name of “appellant” should be preferred to that of “plaintiff” as a more suitable description of one of the parties to an arbitration.

May I point out that in an arbitration arising out of a submission with consent of the parties no such term as “plaintiff” should be employed. The respective parties are referred to throughout by their names. It is only when an arbitration has arisen out of and in the course of an action that the originally proper terms “plaintiff” and “defendant” are retained in the arbitration. 10

In the arbitrations in the County Courts under the Workmen’s Compensation Act the terms “applicant” and “respondent” are employed, but these are not arbitrations within the Arbitration Act. 10

In any case Mr. Munby’s suggestion of “appellant” seems to me unfortunate, as in the case of an appeal (which can arise in certain circumstances and within defined limits out of any arbitration) that becomes the correct and only denomination for the appealing party.

A. M. BRICE.

2, Hare Court, Temple, July 5.

THE THINGS WHICH ARE SEEN.

SIR—I have read with much interest Sir Ambrose Poynter’s genial review of “The Things which are Seen,” which appeared in the last issue of your Journal and I shall be glad if you will allow me to comment upon one or two of the points he raises.

In the first place I must express my gratification that part of the argument in “The Hierarchy of the Arts” is similar to that expounded in Sir Ambrose Poynter’s book “The Coming War” issued as long ago as 1916. Part I of “The Things which are Seen” was submitted to a publisher in 1915, at a time when it appeared highly problematical that I should ever have an opportunity of completing Parts II and III, but the publisher in question declined, and I now think he rightly declined, to accept the manuscript in a truncated form. I am sure, however, that it would have been greatly to my advantage if I had read Sir Ambrose Poynter’s work, and I shall take steps to make myself familiar with it. There is one other matter to which perhaps I may be permitted to refer in your pages as it concerns the question of the popularisation of architecture. Sir Ambrose Poynter has quite unwittingly done a slight injustice to my argument in suggesting that I have called architecture “a minor art.” Painting and sculpture alone were so described in my book, and architecture was included among the first four “major” visual arts. The distinction is an important one because architecture shares the characteristics of human beauty, manners and dress inasmuch as it has its own unique forms which constitute an addition to the sum of the beauty of the three-dimensional world and are not ghost-like imitations of something else existing in that world. Granted that these ghost-like imitations may be of great cultural value, their reality is secondary to the reality of the objects which inspired them. If it were not

so, one might come to the absurd conclusion that a picture of St. Paul's cathedral ranked higher as a work of art and had a more important social function than the cathedral itself!

On the other hand there is nothing derogatory to architecture in the insistence that human beauty, manners and dress have priority to it. In fact, architecture, by being related to these personal and highly popular arts, would in all probability become much more popular itself. And at any rate, if the scale of values expressed in the "hierarchy" of the arts were once accepted we should have heard the last of the irritating assertion, now so commonly made, that so-and-so, having left the architectural studio in order to devote himself to painting, has "given up architecture for art."

July 17th.

A. TRYSTAN EDWARDS.

Fees payable to Architects in Connection with Abandoned State-aided Housing Schemes.

Negotiations between the Ministry of Health and the representatives of the R.I.B.A. have resulted in an agreement being reached on the question of payment to Architects for work upon Schemes which have been wholly or partially abandoned.

These terms and conditions are set out in General Housing Memorandum No. 61, copies of which may be obtained through any bookseller or directly from H.M. Stationery Office.

The main points of difference between G.H.M. No. 52 and G.H.M. No. 61 briefly summarized are as follows:—

- (a) That the Scale of Fees set down in G.H.M. No. 52 has been generally increased in G.H.M. No. 61.
- (b) That whereas G.H.M. No. 52 states that all Schemes must have been approved by the Ministry, Fees for a Scheme may now be passed for payment if it has not actually been submitted to the Ministry.
- (c) That the term "Scheme" in G.H.M. No. 52 has been more favourably interpreted in G.H.M. No. 61.
- (d) That payment will be made under G.H.M. No. 61 in certain cases for the preparation of additional copies of drawings and specifications.
- (e) That Fees for travelling expenses have been set down in G.H.M. No. 61 on a more reasonable Scale.
- (f) That the Ministry are requesting Local Authorities to expedite the settlement of accounts with Architects.
- (g) That the R.I.B.A. will to some extent have to act either as Arbitrators or a Board of Reference in deciding certain points.
- (h) That the settlement arrived at is not retrospective, nor will it affect settlements already arrived at between Local Authorities and their clients.

It is considered that the association of Architects with Housing Schemes is by no means at an end, and that the abandonment of many Schemes may be of a temporary nature only. Further, that the subsequent employment of Architects by Local Authorities—especially where Schemes have been abandoned—will be encouraged when such Schemes are proceeded with.

Notes of Recent Decisions.

BY W. VALENTINE BALL, O.B.E., BARRISTER-AT-LAW.

Arbitration—Refusal of Arbitrators to state a special case or give opportunities to parties to apply to court—whether misconduct. Czarni Kow & Co., Ltd., v. Roth Schmidt & Co., 38, Times Law Reports 595 King's Bench Division.

A submission to arbitration was subject to certain rules by which the parties were precluded from requiring the arbitrators, or from applying to the Court to require the arbitrators to state a case for the opinion of the Court as to any point of law arising in the course of the reference. In a dispute between certain buyers and sellers which was referred to arbitration the arbitrators refused to state a case on the application of the buyers, and, relying on the rule, refused to give the buyers an opportunity of applying to the Court to order them to state a case. On a motion to set aside the award it was held (*without deciding the validity of the rule*) that the buyers were entitled to an opportunity of applying to the Court and that in refusing such an opportunity the arbitrators had been guilty of misconduct and the award must be set aside. It is to be noted with reference to this case that the term "misconduct" is used not in its ordinary but in its legal sense. The arbitrators in taking the course they did take were doubtless acting upon rules which they thought were binding upon them. The really interesting point, however, is that which the Court did not decide. Is a clause which seeks to prevent the Court exercising jurisdiction over arbitration proceedings invalid? Curiously enough this point although it has arisen before in several cases has never been expressly decided. As is well known an agreement to oust the jurisdiction of the Courts is illegal and void as being contrary to public policy; but whether this rule applies to prevent parties agreeing not to refer points of law to the Court is a difficult matter.

Arbitration—Wrought reception of immaterial evidence—whether award rendered invalid. Royal Commission on the Sugar Supply v. Trading Society, Kwik-Hoo-Tong 38 T.L.R., 684 King's Bench Division. (Bray & Greer J.J.)

It is misconduct which may justify the setting aside of an award if the arbitrators hear evidence in the absence of the parties, even though the evidence so received is immaterial. In the above case the arbitrators, without having the parties before them, took the evidence of a trade expert as to the existence of a custom. In the circumstances the evidence was quite immaterial, but its reception in the absence of the parties was held to be sufficient to invalidate the award.

Compensation under the Indemnity Act—War Losses, &c., Commission—What is "Direct Loss"—Reinstatement of business in new premises—A. and B. Taxis, Ltd., v. Secretary of State for Air, 38, T.L.R., 671, Ct. of Appeal, Bankes, Scrutton and Atkin, L.J.J., May 11.

Architects and surveyors are frequently called upon to advise those who have preferred claims against the Government for losses caused by property having been taken over for military purposes. Nor is it easy to advise in such cases, because, apart from the actual terms of the Indemnity Act itself, it is exceedingly difficult to ascertain the principles upon which awards of compensation are made. Cases are heard to all intents and purposes in private, and no reasons are given for the decision of the Court. The claimant may claim £*x*; the Government offers £*y* and the Court awards £*z* (which may have something more than *y* but is always less than *x*) without

giving any reason. In the case above mentioned some useful light was thrown upon a few words of the Act which have hitherto been obscurely understood. By S. 2 compensation may be given to any person who has "incurred or sustained any direct loss or damage by reason of interference with his property or business" through the exercise of the prerogative or of any power relating to the defence of the realm. The premises of the appellants, who were motor car and garage proprietors, were requisitioned by the Government in 1918 for the Air Force, and the appellants acquired new premises and equipped them for their business and carried on in the new premises until the original premises were restored to them. On a claim for compensation being made the War Compensation Court disallowed the cost of reinstatement and awarded £3,484 9s. 10d. and 100 guineas costs. It has been held, however, by the Court of Appeal that, assuming it to have been reasonable in the circumstances for the claimants to re-instate their business in the new premises, the reasonable expenditure incurred in such re-instatement was a "direct loss" within the section and ought not to be excluded in calculating the compensation.

Building Byelaws—Cinema palace—Proper means of exit—Exit into narrow street—Whether plans can be disapproved on this ground—The King v. Mayor, etc., of Cambridge (1922) 1 K.B. 250 King's Bench Division; Darling, Sankey & Branson, J.J., Nov. 11, 1921.

The owners of certain land abutting on Sidney Street, Cambridge, being minded to build a cinema theatre, submitted plans to the corporation in accordance with S. 36 of the Public Health Act, 1890, which provides, in effect, that an urban authority must be satisfied that proper means of egress and ingress shall be provided in the case of every building to be used as a place of public resort. Plans having been revised so as to bring back the building to a new building line were duly deposited. The corporation refused to approve them on the ground that owing to the congestion of traffic in Sidney Street the building if constructed would not satisfy the above provision. A rule *nisi* having been obtained for a mandamus that the council approve the plans, that body, in answer to the rule, relied on S. 158 of the Public Health Act which gives them general power to approve plans. The Court in making the rule absolute (i.e., in ordering that the Council do approve the plans) held that they were not entitled to refuse their approval of the plans on account of the narrowness of the adjoining streets and the congestion of traffic therein; and that there must not only be a bona fide belief as to an infringement of S. 36 of the Act of 1890, but reasonable grounds must be shown for that belief.

Tour of Italian Towns.

A tour of Italian towns of town planning interest has been arranged for September of this year in connection with the Conferences of the International Garden Cities and Town Planning Association and the *Congrès International de l'Habitation* at Rome. The party will leave London on September 14th and arrive back on October 1st. Milan, Bologna, Florence, Rome, Pisa, Genoa and Turin will be visited in the order named. Six days will be spent at Rome. In each of the towns the party will be met and conducted, and everything will be done to make the tour interesting and enjoyable. Special visits during the stay in Rome will be arranged.

Further particulars will be supplied to possible participants on application to the Secretary at 3, Gray's Inn Place, W.C.1.

Professional Defence.

The Minutes of the proceedings of the New Zealand Institute of Architects Annual Meeting held on February 15th, last, show that a resolution was passed calling upon the Institute to set up a Professional Defence Committee on the lines of The Society of Architects Professional Defence Organisation.

The Architectural Scholarship, 1922.

VALUE £15. OFFERED FOR MEASURED DRAWINGS.

The Scholarship is awarded for Measured Drawings, and the Competition is confined to Licentiates and Students of the Society.

Candidates are required to submit at least three and not more than four sheets of measured drawings and details of some building of historic interest.

The drawings must be prepared between January and September, 1922, and are to be executed on imperial size paper, and delivered carriage paid at the Society's Offices, 28, Bedford Square, London, W.C.1, on or before September 30th, 1922 together with the original sketches and notes.

The drawings must be without name, motto, or other mark of identification, and must have attached thereto a plain sealed envelope containing the Competitor's name and address and a signed and attested declaration that the drawings are the Candidate's unaided work.

The drawings will be numbered as received, and a corresponding number placed on the envelope, which will not be opened until after the award has been made by the Assessors and confirmed by the Council.

The Scholarship is of the value of £15, and will be disbursed by the Council on behalf of the holder.

The award will be made by the Council subject to their approval of the manner in which the Candidate proposes to utilise the Scholarship, or alternatively, to the Candidate agreeing to such a scheme as the Council may decide upon.

Should the scheme not call for the payment of so much as £15, the holder may receive the value of the balance in books or instruments.

The Council will not be responsible for any loss or damage that may occur to any drawing or document submitted in connection with this Competition, nor for any delay in delivery.

The Council reserve the right to exhibit and/or reproduce the drawings, and their decision on any matter arising is to be final.

The Scholarship may only be held once by the same person.

The Library.

Members concerned are reminded that all books out on loan should have been returned to the Society by July 31st for stock-taking purposes and are requested kindly to make good any oversight.

BOOKS PRESENTED.

THE LAW OF BUILDING, &C., CONTRACTS.* By Alfred A. Hudson. Third Edition, Vol. I. London: Sweet & Maxwell, Ltd, 1907.

THE VANDALISMS OF PEACE. By W. Randolph. London: Routledge & Sons, 1922. Price, One Shilling net.†

BOOKS PURCHASED.

CINEMATOGRAPH THEATRES. London: "The Builder" Publishing Office, 1922.

* By Valentine Ball, Esq.

† By the Publishers.

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The Teaching of Construction at the Ecole des Beaux-Arts.*

ARCHITECTURAL COMPOSITION.

I think that since the attempt which we have this year made at the Ecole des Beaux-Arts in Paris in the teaching of construction is bound up with that of architectural composition, we must rapidly examine the operations which are required to enable us to create and erect a beautiful work of architecture which shall represent in the material sphere the true and realisable solution of a given programme.

What is the method followed at the Ecole des Beaux-Arts for the attainment of this result ?

Having thoroughly studied the programme, having examined not only the material conditions to which it is necessary to conform (the work must be adapted to its practical object), but also the theoretical conditions (the work must bear the character which is most perfectly appropriate); having classified the dominant, the secondary, and the accessory elements of the programme, the student, having thus grasped the true conception of the subject, by means of a number of sketches, mostly freehand work, which enable him more rapidly to embody his thoughts by making

* From a report by Professor Edouard Arnaud, published in the R.I.B.A. *Journal* of January 14th, 1922, which should do much to dispel the prevalent idea that the system of architectural training at the Ecole des Beaux-Arts is not "practical."

instinctive use of the interrelations between mind and senses, endeavours to give form to his thoughts by appropriately suggestive lines, which he combines and proportions in conformity with the nature of the programme, and refines by successive tracings, striving to preserve in the entire work not only the character which he has conceived, but also a spirit of lucidity and unity.

He proceeds from the vague to the definite, from the general to the particular from mass to detail, each point to be solved at the proper time, each element of the programme placed with the emphasis and character suitable.

If his solution of the programme is true, and if the expression of it which he has found is correct and individual, he would obtain what we call a successful "parti."

This is, briefly, the work of composition as taught and practised in the ateliers of the school.

I do not think it is possible to improve on this method of teaching. It is for the student to turn it to the best account.

Its great superiority over the systems practised in other French or foreign schools is due to:—

1. The fact that it conforms to the law of all creative work.
2. The value of the teaching of professors and patrons of the ateliers, who are all masters of their art.
3. The advice and criticism of senior students, whom the juniors watch at work.
4. The rivalry between ateliers, which always stimulates effort towards improvement.
5. Finally, that atmosphere of artistic probity, impartial discussion, zeal, and mutual help, which prevails in the ateliers, and owing to which, in any competition, students take an interest in the design of their competitors and endeavour to impress an individual character on their own work.

This solution, checked and drawn in detail, must, with a view to execution, be completed by means of specifications, priced quantities, estimates of cost, and tenders. Afterwards comes the realisation: execution of works, checking and settlement of accounts, &c., all these things being within the realm of experience and professional practice.

These are, in fact, the operations which the architect must follow methodically from the moment when he acquaints himself with the programme until the time when the work is completed.

We see his knowledge of construction brought into play:—

1. At the outset, in the shape of instinctive guidance, during composition.
2. After the "Parti" has been settled, in the shape of scientific control.
3. From that moment up to the end, in the shape of practice and experience.

Is it possible in a school to impart all this knowledge, necessary as it is, and require of the student that he shall be master of it at the time of examination? Assuredly not.

Time would not suffice, nor could the brain of the student grasp it all. To overload the student's memory will defeat its own object. Rather, his scientific and practical mind must be trained, just as his artistic mind is trained; he must learn how to set out the conditions of a constructional problem, and how, by applying the principles governing any question, that question may be solved. By means of numerous illustrations he must be interested in matters of construction, endowed with the sense of construction, and supplied with numerous examples to guide him in his

career. He should be made as capable of creation in the realm of science as he is in that of art, in order that he may overcome difficulties in his career by reference to his lectures, with the support of mature judgment and common sense.

Let us observe, in the first place, that the teaching of construction is based in equal parts on imagination, reinforced by practical and scientific knowledge, and on purely mathematical calculation which can only be applied to the product of imagination.

The Ecole des Beaux-Arts has long since entrusted the teaching of this second section, which includes stresses and strains, to a fully qualified professor; just as it has entrusted to specialists the teaching of mathematics, descriptive geometry, perspective, physics and chemistry, geology, etc., all subjects necessary to a proper scientific training.

There remains the teaching of practical construction. This may be divided into two parts:—

Before making the student acquainted with the use of materials according to recognised rules, and with the solution of the various structural problems which may arise, he ought to be made familiar with the nature, the qualities, and the defects of all the materials which he will have to use; he must also be taught the recognised methods of jointing wood, iron and stone, comprised in the study of stereotomy; and again he must learn the nature of such materials as plaster, lime, cement and the like, and the composition of mortars and concretes.

At the Ecole des Beaux-Arts it is the Professor of Stereotomy who has charge of the first part of such teaching.

Being thus prepared by the various courses above referred to, and having passed all the requisite examinations, the student is admitted to the course which at the Ecole des Beaux-Arts is called the construction course.

WHAT A STUDENT MUST KNOW.

But, however successful the solution of the programme may be in itself, it is of no use unless it is capable of execution, and unless its mode of construction also expresses truth.

The student must therefore know the materials which can be employed in the building, so as to choose them judiciously in conformity with the spirit of the programme; he must know the method of construction in use, the calculations of stresses; and, besides, he must know how to arrange methodically the numerous technical plants which were unknown in the past, which are required by modern practice, and which virtually transform certain portions of present-day buildings into small engineering centres.

A knowledge of science, no less than of art, is a necessity for the architect. If he knows little or nothing about it, his scope of expression must be considerably restricted. Schools must, therefore, train their students from the scientific as well as from the artistic point of view.

But whatever methods of construction may yet be discovered, however important may be the new services or devices required in future buildings, the school must never forget that art alone can create, where science is merely a means of control.

Even in the domain of science, when a master creates, it is his imagination—that is to say, the artist in him—which guides him. Having made his discovery, he will then put it to a scientific test in order to ascertain whether or no it will live; but his calculations must be based on something tangible, which belongs to the domain of creative art.

Every architect, therefore, must be an artist and a scientist.

But since his work must be capable of actual construction, his scientific knowledge must be applied even during the period of composition, although this belongs to the domain of pure art.

HOW TO APPLY KNOWLEDGE.

But in what manner must his scientific knowledge be applied?

It is essential to define it here, because many schools are still in error, and can never produce students capable of achieving success.

During the period of composition the scientist must remain in the background, and yet always within reach of the artist, to remind him of material possibilities. The scientist must not at every moment wish to control what proceeds from the artist's brain: by so doing he would quickly clip the wings of inspiration. Above all, he must not take the lead: that would be disastrous. The mind of the artist must move in the realm of construction; but in order to create, he must jealously preserve his liberty in combining units, placing them in proportion to their value, and seeking the most characteristic expression of the idea, without every moment looking to see whether what he is doing will or will not have to be modified by calculation. The scientist must for the moment only supply the instinctive selection of those forms which are capable of realisation with the materials available, and this until the solution of the problem is found. Only then will the scientist resume control with all mathematical checks. And if he has rightly exercised his rôle of informing the artist, without disturbing him, during the creative phase, the final result will not be modified by such control.

THE CONSTRUCTION COURSE.

The object is to instruct the student without drudgery in all the parts of a building, all the ever-multiplying processes of construction: to set before him numerous practical examples, calculated to awaken his mind to structural matters and to imbue him with a sense of structure; finally, to show him how work is executed, without the need of group visits to buildings in progress, visits which are difficult to arrange and often involve a disproportionate waste of time. This purpose dictated, more or less the following method of instruction:—

1. The slow and often soporific dictation of the professor is exchanged for the rapid stimulating delivery of the lecturer.
2. Instead of diagrams slowly drawn on the blackboard by the professor, lantern slides are exhibited, so that in a course of forty lectures some 6,000 or 7,000 diagrams are shown and commented upon, instead of 400 or 500, and this without exhausting the student, who, having no notes to take, can devote all his attention to the subject under discussion.
3. The student is not obliged to take notes, but the whole of the lectures (both texts and diagrams) are printed for him to study at his leisure.
4. The student is required to devote a note-book to special sketches, kept up to date between the lectures.
5. At the oral examination he is only examined on a list of questions designated beforehand and dealing with fundamental principles.
6. He is required to produce a final design showing the application of his knowledge of construction.

In order that the course may be interesting and practical, all the known processes of construction and all the problems which may be met with in the erection of a building are dealt with in the exact sequence in which they occur during execution, from excavations and foundations to final completion, including painting and decoration.

Thus the student sees the continuous growth of the building, and can rapidly find in the printed lectures the answer to any question which may arise.

Generally speaking, when dealing with a definite subject, and whenever it is possible to do so, the construction problem is first set, together with all the conditions to which it must answer; the theory of the various possibilities of such a problem is next laid down; then the geometric drawings which are to solve the problem are thrown on the screen, with views of works either in course of execution or already completed.

In recapitulating the course of lectures a general survey is made of the methods used on a large building, always observing the same sequence—the study of the programme, lantern slides of the geometric drawings which form its solution, and some 150 or 180 pictures covering the whole work from foundations to roof-tree.

The course of lectures also contains a quantity of supplementary information which is only touched on in the lecture room.

To enable the pupil to find his way amongst a rather voluminous set of papers, and in order that his attention may not be distracted from essential questions, he is at the very outset given a set of 90 questions which will be asked at the time of the examination, and each one of these questions is accompanied by the relative text and sketches which alone will have to be reproduced on the blackboard.

The printed course also contains rather elaborate information as to how to draw up specifications, bills of quantities, estimates, tenders, as well as how the work should be conducted, settlement of accounts, and architects' book-keeping. This part of the course, however, is not called for in the examination; for the time being at least it is but the embodiment of general information, with examples which will be invaluable for the student in the exercise of his profession.

The object of the book of sketches which the student will have to produce at the time of his examination (which sketches cover the various component parts of a building and connect the subjects specifically treated with the other constructional subjects) is to teach him how to express his thoughts in plan, section, elevation, or perspective (a language which he will have to use all through his professional life). And we also aim at teaching him better those fundamental questions which will be the subject matter of his final examination.

In order to obtain an honourable mention in construction and to pass from the Second to the First Class, the pupil, after successfully passing his oral examination, must further produce an important constructional design, demanding two and a half months of assiduous work. This is the crowning point of this course of instruction, showing the application of the student's technical and scientific knowledge to a large architectural scheme.

The author of an unsatisfactory design is relegated for another year.

Such is the new *régime* which has been put to the test this year at the École des Beaux-Arts in connection with the teaching of construction.

Although science and constructional experience may be factors in the successful career of an architect, these should not be made the predominant object of the teaching in a school of architecture which aims at artistic distinction in its students.

General Housing Memorandum No. 61.

FEES PAYABLE TO ARCHITECTS IN CONNECTION WITH
STATE-AIDED HOUSING SCHEMES.

The Minister of Health has given careful consideration to representations which have been made to him relative to the terms and conditions of payment for abandoned work as provided for in G.H.M. No. 52. While he considers the payments there authorised to be generally reasonable, he has recognised that, as between different schemes partially abandoned, the fees provided for could be more equitably apportioned in relation to the proportion of the work which is carried out; that, moreover, there are certain cases where schemes have been completely abandoned, in which the scale of payment for plans does not sufficiently allow for all the general work which may have been involved. In consultation with representatives of the Royal Institute of British Architects, the Minister has decided, therefore, that the following modifications shall be made in the terms as set out in G.H.M. No. 52.

A.—G.H.M. No. 52 refers to "plans which are abandoned after approval by the Minister." This applies also to the present Memorandum; it is recognised, however, that plans may have been prepared by an Architect to the instructions of a Local Authority, which have not been approved by the Minister, or even submitted for approval; and that the Architect may be entitled to payment for them. Provided the instructions to prepare plans were properly given for an extent of work and number of houses not exceeding those with which the Local Authority had been authorised to proceed, and that the work was abandoned with his approval, the Minister is willing to consider whether these plans are of a character which would have been approved had they been submitted, and what payment can be allowed to be charged to the Housing (Assisted Scheme) Account in respect of fees for such plans.

G.H.M. No. 52. II.—ROADS AND SEWERS.

B.—For sub-clauses (i) and (ii) of Clause 1 the following will be substituted:—

- | | | |
|-------|---|---------------|
| (i) | If the preliminary scheme of roads, drains and sewers based on contour levels has been prepared, the proportion of the scale of fees, set out under the heading "B"—"Roads and Sewers," in G.H.M. No. 31, to be paid shall be | $\frac{1}{6}$ |
| (ii) | If, in addition, the roads have been pegged out and the levels taken for sections the additional proportion to be paid shall be | $\frac{1}{6}$ |
| (iii) | If, in addition, the sections have been set up in accordance with the levels taken and embodied in the working drawings of Roads and Sewers the additional proportion to be paid shall be... | $\frac{1}{6}$ |
| (iv) | If, in addition, Specifications and Bills of Quantities have been prepared, and all the work necessary for the purpose of obtaining tenders has been done, the additional proportion to be paid shall be | $\frac{1}{8}$ |
| | Total proportion | $\frac{2}{3}$ |

For Clause 2 the following will be substituted:—

In all cases of partially abandoned schemes the fees payable for the abandoned work shall be three-quarters of the fees indicated in (i), (ii), (iii) and (iv) of the preceding paragraph according to the circumstances of the particular case.

G.H.M. No. 52. III.—HOUSE PLANS.

C.—Sub-section (c) shall be amended as follows:—

In so far as plans were prepared prior to July, 1921, the fees shall be calculated on an assumed average cost of £700 for all types of houses. In the case of plans prepared in or after July, 1921, the fees shall be calculated upon the average price at which tenders were approved by the Minister for the types concerned during the month previous to that in which the scheme was abandoned, but in no case to exceed £700.

D.—For paragraph 3 there shall be substituted the following:—

3. (a) In the case of partially abandoned schemes the fees shall be a fraction of those payable in the case of schemes totally abandoned, according to the proportion of the work abandoned. The fees set out in paragraph 1, sub-paragraphs (i) or (ii) of Section III of G.H.M. No. 52, shall be multiplied by a fraction calculated as follows:—
- (i) For the purpose of the calculation, the work in any scheme of an Architect or Panel of Architects shall not be deemed to include more than 250 houses; any cases involving more than that number shall be treated as if they had comprised 250 only.
 - (ii) The denominator of the fraction shall be the total number of houses for which plans were prepared by the Architect or Panel of Architects on the definite instructions of the Local Authority, provided that plans for that number were approved by the Minister and they are shown on an approved large scale lay-out plan, but limited by the maximum of 250 as above.
 - (iii) The numerator shall be the number by which the number of houses in the denominator as defined in (ii) exceeds the number of houses erected.
- (b) In any partially abandoned scheme in connection with which an Architect has prepared plans for a greater number of houses than 250, there shall be paid, in addition to the fees arrived at in accordance with (a) above, for any separate designs prepared for the abandoned portion, and not utilised for the portion erected, one half of the scale fees allowed for such designs under sub-paragraphs (i) and (ii), paragraph 1 of Part III of G.H.M. No. 52.

E.—The following additional clauses shall be added to G.H.M. No. 52, Part III:—

4. In all cases in which the Royal Institute of British Architects satisfy the Minister that an Architect has been commissioned to carry out a housing scheme and has prepared plans approved by the Minister, but that no houses have been erected from his plans on the housing scheme of any Local Authority for which he has prepared plans, the following scale of payment for house plans will apply instead of that provided in G.H.M. No. 52, and the Local

Authorities concerned will be notified by the Minister as to the amounts payable.

- (a) For preliminary negotiations with the Local Authority and the Ministry, and for preparing sketch plans and all other general work incidental to the abandoned scheme, payment will be made to each Architect on the following scale, based on the number of houses for which plans were prepared by him as defined and limited in paragraph D. 3 (a) above.

For the—

First	12	houses	the	fee	shall	be	£10	per	house.
Next	60	"	"	"	"	"	£3	"	"
"	178	"	"	"	"	"	£1	"	"

Maximum Number 250

- (b) If all the work necessary for obtaining tenders for houses has been completed, an additional fee of £26 will be paid for each separate design approved by the Minister for which working drawings have been made.

F.—In all cases before payment of fees, the Local Authority should be satisfied that the Architect has properly carried out the instructions of the Council and the requirements of the Ministry, and that all the work covered by the respective stages has been done.

G.—The foregoing terms and conditions will not apply in any cases where an agreement providing specifically for abandoned work has been made or where a final settlement has already been arrived at between the Local Authority and the Architect prior to the date of this Memorandum. If the Local Authority have made any such agreement or final settlement without the approval of the Minister, the terms of the agreement should be notified to the Minister.

G.H.M. No. 52. GENERAL.

H.—The last paragraph of G.H.M. No. 52 shall not apply to abandoned work on house plans. Both for the purpose of calculating the fee and ascertaining the proportion abandoned, the work of the individual Architect or Panel of Architects for each Local Authority shall be taken to be a scheme.

SUPPLEMENTARY.

I.—Travelling Expenses:—

In Memorandum to Housing Authorities 51/D, reasonable travelling expenses are allowed to an Architect in respect of journeys over 25 miles from his office. In cases where, although the journeys may be less than 25 miles from his office, an Architect is involved in unusual expense owing to the Site or Sites being situated more than three miles from a railway station, and not served by any other regular public means of conveyance, the Minister will be prepared to allow as a charge to the Housing (Assisted Scheme) Account the reasonable out-of-pocket costs necessarily incurred in travelling from the nearest railway station to the Site.

K.—In cases where no Bills of Quantities have been provided and the Architect has been required to supply the necessary extra copies of drawings and specifications from which to obtain tenders, allowance shall be made for the reasonable out-of-pocket charges incurred for the purpose.

L.—Owing to the doubts which have existed as to the application of the provisions of G.H.M. Nos. 4 and 81 in regard to abandoned work, payments to Architects have, in some cases, been delayed. In view of the further information contained in this Memorandum, Local Authorities should make prompt settlement, or substantial payments on account, in respect of the amounts payable to their Architect for professional services rendered.

A copy of this Memorandum should be handed to the Local Authority's Financial Officer.

MINISTRY OF HEALTH, WHITEHALL, S.W. 1, July, 1922.

This Memorandum is published by His Majesty's Stationery Office, and may be purchased price 1d., through any Bookseller or directly from H.M. Stationery Office at the following addresses: Imperial House, Kingsway, London, W.C. 2; 28, Abingdon Street, London, S.W. 1; 37, Peter Street, Manchester; 1, St. Andrew's Crescent, Cardiff; 23, Forth Street, Edinburgh.

VICTORY SCHOLARSHIP COMPETITION, 1922.

The ten selected Candidates took part in the final competition, held in the Atelier at 28, Bedford Square, London, on July 15th, 1922, the subject of the *esquisse* being a Stadium for Olympic games.

Eight completed designs have since been received and the following is the Assessors' award, which is subject to confirmation by the Council.

No. 97 H. St. John Harrison, Architectural Association, London, £60 and the gold medal.

No. 68 N. C. Mackey, First Atelier of Architecture, London, £20.

No. 107 K. D. P. Murray, First Atelier of Architecture, London, £20.

The report of the jury states that while the general standard is much higher than in previous years there is no design of outstanding merit beyond those of other competitors. The jury therefore has felt bound to divide the prize again. Mr. Robert Atkinson on behalf of the jury of Assessors will, on a date to be presently advertised, give a public criticism of the designs.

The drawings will be on view at 28, Bedford Square, W.C. 1, between 10 a.m. and 5 p.m. from September 4th to October 13th inclusive, except on Thursdays and Saturdays.

SECOND HALF-YEARLY DESIGN COMPETITION, PART I.

Twenty-six designs were submitted in this Competition, which closed on August 8th. The jury of Assessors, Messrs. L. Sylvester Sullivan, Percy B. Tubbs, H. M. Robertson and Thos. Wallis, have selected the authors of the drawings numbered 5, 8, 9, 10, 11, 17, 18, 23 and 24 to compete in Part II.

The following are the selected Candidates:—

LICENTIATES:—Arnold Taylor, of Bishop Auckland (II); Edward E. Bridge, of Liverpool (17).

STUDENTS:—J. C. H. Bawcutt, of Oxford (5); Leo. E. McMullen, of Manchester (8); K. F. Harris, of Linton, Near Maidstone (9); H. G. Avery, of Leeds (10); V. C. L. Saunders, of Ventnor (18); P. E. Titley, of Warrington, Lancs. (20); W. J. Werry, of London (23); H. C. Wilkinson, of Nelson, Lancs. (24).

Royal Sanitary Institute.

BOURNEMOUTH CONGRESS.

The Society of Architects was represented at this Congress by its Local Honorary Secretary, Mr. Harry Hawker, F.S.A.R.C. The following are summaries of some of the papers read at the Meeting of the Engineering and Architecture Section.

Open Spaces in the Rear of Small Houses.

By MANNING ROBERTSON, A.R.I.B.A.

Mr. Robertson here suggests that building by-laws allow houses to be built on wrong lines, indicates remedies for the evils arising from cramping house frontage, and makes a new proposal to meet the difficulty.

In examining pre-war housing, leaving out of account the question of design (which is not without its bearing on the moral and physical welfare of the people), we find, almost universally, the following characteristic defects:—

1. The frontage is too narrow.
2. Light is obscured from the main back windows by an extension of the building at the rear.

It is impossible to prevent the erection of these narrow-fronted houses by any stipulation as to a minimum frontage. I suggest that the problem can best be tackled in two ways simultaneously; first, by reducing compulsory development charges to a minimum; secondly, by getting power to secure adequate lighting, and in each of these directions Parliament should be asked to extend the requisite powers. The first remedy is persuasive, the second obligatory, but both would tend towards the discontinuance of the evils under consideration.

Let us now examine the position with respect to cramped frontage, in so far as this is unintentionally encouraged by the by-laws.

It has for many years been the custom in this country to place two or more "working-class" houses where there was only adequate room for one, or four where there was only proper space for three, and, while it cannot be said that by-laws or other regulations were entirely responsible for the practice of overcrowding, by which term I denote excessive density, it is certain that they have on the one hand indirectly fostered it and, on the other, have not directly prevented it.

The limitation of the number of houses to the acre would get over the difficulty, and is a necessity in any town-planning scheme, but such a restriction could hardly come within the scope of the by-laws, and it is first in the direction of relaxing overstringent demands in road-making that we must look to them for help.

The lack of elementary town-planning principles, especially in connection with transport, has contributed to the practice of treating minor roads as potential main thoroughfares; all roads had to be made of a width and substance to permit, if necessary, of their use as main roads. The waste of resources involved in such haphazard methods is obvious, and is easily avoided by the exercise of a little forethought.

We now come to defect No. 2, to which I propose to offer a definite solution. First, the Public Health Act of 1875, which gives power to secure "a free circulation of air," must be amended to include light, and I suggest that the attention of the Minister of Health be drawn to the urgency of obtaining such amendment. Under the law as it stands it is doubtful whether windows can be legally demanded at all, and whether holes in the wall or dark louvres would not meet all strictly

legal requirements; but as we are here considering abuses that are in being, and not those that might legally arise, I shall confine myself to outlining two proposals, each of which pre-supposes that we are given powers to deal with light, and either of which should help to cure existing evils.

The first possibility would be to include a proviso in the bye-laws to the effect that no extension to the rear of any dwelling-house shall be so constructed as to interfere materially with the light entering any living room or bedroom. I am dubious about this proposal, because the word "materially" would be interpreted in different ways: some might consider that any extension to the rear was inadmissible, while others might allow a serious obstacle to light on the grounds that the obstruction was not really material, and this difference of interpretation must lead to confusion, and the rule would sometimes fail in its purpose. One would prefer a simple and definite requirement, binding upon everyone who built a dwelling-house, one that would be applicable to all houses and in all districts. The difficulties of devising a satisfactory rule of this kind are: that it must apply equally to all houses whether detached or in terraces; it must not hamper good design nor become illogical when applied to large houses; neither must the action of A in building a house prejudice the position of B if he wishes to build a second house adjoining A; in other words, no individual's action should affect the rights of a neighbour.

My proposal, which I think meets these difficulties, is that the following rule should be adopted:—

Where any Living Room or Bedroom, situated on the Ground Floor, depends for its light upon a window in any rear wall, the width of the open space adjoining such window, measured parallel to the window, from any wall rising above the level of the sill, and projecting more than four feet from the plane of the face of the wall containing the window, to any other such wall, and to the boundary of any lands or premises adjoining the site, shall not be less in any part than twelve feet.

This rule precludes the back extension where it does harm, but legitimate use can still be made of this feature, because the ill-lighted back wall can be used for windows of minor importance. It will also be noted that when living rooms or bedrooms are adequately lighted from elsewhere, as in through rooms, there is no restriction as to extending the building to the rear.

Town Planning.

By G. L. PEPLER, F.S.I., Past President of the Town Planning Institute.

Mr. Pepler maintains that our national prosperity depends on the increasing provision of opportunities for good health and fine living, to attain which it is essential that all should work to a general plan.

Unless the development of our towns is governed by a general plan, those whose duty it is to safeguard and improve the health of the community can have no solid basis to go upon and their work will continue to comprise chiefly the remedy of ills rather than their prevention, by securing sound original conditions. Also a good piece of work in one direction may be vitiated through lack of means of co-ordination or because the surroundings are not under control.

This is not only bad from the point of view of health: it is also bad business as not only does it lead to wasteful expenditure of public money, but in addition no attempt is made to direct private development into lines that fit in with public requirements and thereby, at no extra cost to anybody, save the necessity for subsequent improvements or remedies at the expense of the ratepayer.

The aim of the Town Planner is to avoid this waste and to provide, in consultation with all those on whom the prosperity of the community depends and those who are in charge of its welfare, a framework within which all their progressive and beneficial activities—having a clear road before them because part of a general plan—can have the fullest possible scope to develop to mutual advantage.

Before this general framework can be designed it is first necessary that a careful survey should be made which will show us the function for which each part of the district is best suited, *e.g.*, the land offering the most healthy and attractive conditions for homes, the land best suited to industry, the transport facilities and where they need to be developed or improved, areas where playgrounds must be provided, land particularly suitable for parks or for raising food, possibilities as to a civic centre, shopping and commercial centres, areas requiring reconstruction, etc.

Having ascertained these facts one can then prepare a town plan that will reserve suitable areas for their proper uses, and at the same time make provision for intercommunication so that the people may live in healthy surroundings, in homes so disposed and spaced as to receive the maximum amount of sunlight and clean air, not tied to their workplaces, but within easy reach of them and of recreation and shopping facilities.

It is clear that adjoining districts have a common interest in many of these matters which cannot be dealt with efficiently unless treated strictly on merits without regard to district boundaries, as such boundaries rarely bear any relation to the factors that should govern development. The Town Planning Acts provide for joint action by neighbouring Authorities, and it is encouraging to note the increasing use that is being made of these powers with a view to the preparation of joint outline schemes for regions comprising units of common interest. Joint Town Planning Committees have already been set up for the following regions, and conferences have been held with a view to establishing others—Manchester and District, covering about 100 square miles and embracing many busy towns, South Yorkshire Coalfield, South Dee-Side, South Tees-Side, Rotherham Region, Mansfield Region, and South and North Tyneside. Mention should also be made of the South Wales Regional Survey Committee which prepared an exhaustive and illuminating report as regards that region.

Housing from the Technical Point of View.

By W. R. DAVIDGE, F.R.I.B.A. (late Housing Commissioner for the Southern Counties and London Areas).

Mr. Davidge refers to the standard of housing set in the Government "Manual" early in 1919, which he shews has had to be modified, but even so the standard of Cottage building is improved, though much remains to be done.

The Local Government Board, only nine years ago, in their official publication, recommended cottages with narrow frontages of only 16 feet, and even shewed back additions. Many cottages had only two bedrooms. Bathrooms were unrecognized, and even baths, when introduced, were almost invariably to be placed in the scullery, while lavatory basins and upstairs W.C. were alike unknown.

Then as to the style of architecture of those now remote days of 1913. Sound construction was important, but the employment of an architect in connection with in the scullery, while lavatory basins and upstairs W.C.'s. were alike unknown.

The prolonged and careful inquiry instituted during the war by the Depart-

mental Committee on Building Construction under the chairmanship of Sir John Tudor Walters reported in 1918 on Housing and House Construction in detail and the report of this Committee may be regarded almost as epoch making in itself it was one of the greatest advances in housing ever made in this country. The Ministry of Reconstruction, had also during the later stages of the war issued a number of suggestive reports including reports by the Advisory Housing Panel on the Emergency Problem, The Women's Housing Sub-Committee and the Housing (Financial Assistance) Committee.

Meanwhile many organisations were bringing pressure on to the Government to reform their methods in dealing with housing and at the same time to encourage the local authorities to go ahead by guaranteeing them against all loss in excess of a penny rate.

The result of this constant pressure was that the Government gave way to the demand for improved conditions and as to the penny rate. The Ministry of Health, in their "Manual on the Preparation of State-aided Schemes," published early in 1919, embodied all the important conclusions of the Tudor Walters Report, and officially set a new standard of housing for the whole country to be modified, it is true, at a later date in actual practice so far as sizes of rooms are concerned, but otherwise substantially setting forth the standard which has now been put into practice.

The "Lay-out" and aspect of the house now for the first time received official consideration.

"By-law" roads were to be no longer a necessity, and the width was to be in future regulated, not by a hard and fast by-law, but according to the traffic expected, and economy in road planning was strongly recommended.

A minimum of three bedrooms was regarded as essential, and the sizes of rooms were laid down.

An analysis of the plans shews that, with the abolition of back additions and long continuous rows of houses it becomes desirable, in order to secure the best aspect to every room, to have a larger frontage to the individual house. Even one room and a 3-ft. passage will require at least 21-ft. frontage, and this is insufficient to give more than two small rooms at the rear of the premises. A better frontage for this type of house is from 22 to 23 feet.

With a double-fronted house, consisting of two decent rooms, a minimum frontage of about 25 feet is required, even with a side entrance, and with the entrance in front a further 3 or 4 feet must be added.

Much controversy has raged over the height of rooms, which were recommended by the Local Government Board as 8 feet from floor to ceiling. Many Councils asked for 9 feet, to comply with local by-laws, and the L.C.C. successfully claimed the right to increase the height to the dimension required by the London Building Acts, viz., 8 ft. 6 ins.

Steep pitched tile roofs, although not exactly recommended, were certainly encouraged as an additional amenity and it was particularly desired to avoid the monotony of repetition, except possibly as to standardisation of doors, fittings and windows, etc.

In practice, after three years, we find that owing to stringency of national finance and the damaging effect of rising prices, it was necessary in many cases to curtail the sizes of rooms somewhat below the "Manual" standard, and at the same time to eliminate many architectural features which might otherwise be desirable, but even with these curtailments the standard of cottage building is distinctly improved, so far as amenity and convenience are concerned.

Much has been done, but very much more remains to be done.

The Government have not yet announced what they propose to do when they have completed the whole of the 176,000 houses to which at present they have set their hand, but it is evident that some form of municipal housing will have to be continued and so long as the Rent Restriction Acts are in force, some form of assistance or contribution from national funds, either for the purchase of land or by other State grant is almost essential, if the housing is to be provided in the districts where it is most needed. It is evident that little, if anything, can be done to improve slum conditions unless the supply of new houses is sufficient to allow a portion, at any rate, of the defective houses, to be removed or reconstructed each year.

The Committee emphasize particularly the need for a definite plan for the development of London and similar large cities.

Sanitary Annexes to Ward Blocks.

By A. SAXON SNELL.

Mr. Saxon Snell criticises the practice of placing the sanitary conveniences in disconnected towers, and suggests putting them among the ward annexes.

Until recent years it was usual to place the sanitary conveniences in towers built out at the lower or open ends of the ward blocks, with disconnecting cross-ventilated lobbies. The disconnection was efficient if the windows of the lobbies were kept more or less open; but the position of the towers overshadowed beds at the end of the wards and shut out valuable light and air.

It is more usual now to have one tower only, and placed at the upper or closed end of the ward, and so arranged as to avoid overshadowing the separation wards and day rooms. It is thus under better control and supervision.

Even so it is still an excrescence, and comparatively costly to build; and some architects, therefore, have boldly eliminated it, by building the sanitary offices among the ward annexes (separation wards, scullery, etc.). An intervening lobby lighted and ventilated by a window is regarded as sufficient cut-off from the approach corridor to the wards. It is, however, open to doubt, because with a strong wind blowing against the window, air would probably pass through into the corridor, drawing with it the foul air from the W.C., etc.

It would seem better to provide means of *through* ventilation, either by opposite windows, or by a window at one end of the lobby and a ceiling ventilator at the other opening into the air.

Rain Water for Villages.

By MISS C. COCHRANE.

Miss Cochrane describes how she provided a water supply in a small village, but does not give details of cost, or by whom it was borne.

In a small village in which I live, Cambridgeshire, there has often been a shortage of water in the summer, and on some occasions the only drinking supply (from a chalk vein) has failed altogether for a time. At some times of the year also the pond water is not fit to drink. Last summer the position was very serious. Nearly all the ponds and streams were dry, and the drinking supply failed for several weeks. The village people had to depend on the few showers they caught in their tubs, and on the dregs of the ponds. In my own home we fortunately have large

rain water tanks, and we shared our supply with some of our neighbours.

The soil of the district is strong boulder clay over yellowish gault, and if a well is dug, and now and then, at a depth, a little water is found, it is brackish and unfit to drink. The only drinking supplies are from small veins of chalk, which are very few and far between; one each in two of the seven villages, and in other villages only surface wells and ponds.

In October it occurred to me that I might do something to secure permanent water supplies, and also to find work for the three unemployed labourers in the village.

The first thing I did was to double the storage of the drinking supply in the chalk vein. I dug a second well 27 ft. deep about 6 ft. distant (also in chalk), 2 ft. less depth than the old one, and connected them with a pipe; and I am glad to say the supply of water has not failed since. About 2 ft. came into the new well when we had finished digging.

In the centre of the village, on a wide piece of grass, never manured or polluted in any way, I dug a well 16 ft. deep and 6 ft. across, and lined it with bricks laid in cement. I then turned all the spouting from a large building, with a slate roof, through drain pipes for a distance of about 90 yards to the well, and there has been an abundance of water ever since. The collecting roof is clean and has no chimneys, and as the drinking supply is near I did not put a filter bed, as this supply is for household and washing purposes.

For two other groups of nine and four cottages I also dug wells, and provided double filter beds of coarse gravel, fine gravel and sand, and have in all cases made arrangements for overflow, and have also raised and domed over the tops. I got the landlord to repair the spouting, and by drains from all the cottages I brought the water through pipes and filter beds into the wells situated at convenient distances from the cottages. In one instance the tenants were particularly pleased at the prospect of their house being so much drier than with the roof water soaking into the foundations and walls.

At the village school, where there was no water except in tubs, I dug a well 11 ft. deep by 6 ft. across, conducted into it, through a double filter bed, the rain water from the roof of the school; lined the well with bricks, clay puddled behind and lined throughout with a thick coating of cement, with which was mixed the proper proportion of profit—10 gallons for the well and filter bed—to make both impervious to the soakage of any water from outside. A large double filter bed was made in the same way.

VICTORY SCHOLARSHIP FUND.

A sum of £1,209 is required to complete this fund, and it is hoped that any members who have not yet contributed will make a donation. Contributions to the fund are not limited to members, and some of the most generous donations have been received from friends who are interested in Architectural education.

APPOINTMENTS REGISTER.

In the interests of all concerned arrangements have been made for the interchange between the Society and the Central Employment Bureau of the A.S.A.P.U. of all particulars received relating to professional appointments, vacant or required. The Secretary of the Society will be glad to hear from Members who require the services of permanent or temporary assistants, or part-time collaboration with other architects.

*Some Aspects of Indian Architecture, Chiefly Hinduistic.

By K. N. SITARAM.

Architecture in India is only a prayer in stone, and a due appreciation of it is impossible without her poetry and sculpture. Though it may sound rather curious, it is none the less a fact that the Indian genius was more fond of sculpture than of architecture or painting, and that, even when they execute to perfection, still the vision that guides and inspires is more that of sculptors than of architects or painters. The process by which they reduced whole mountains into monolithic temples, like the Kailasa or the one at Kalugumali, and fashioned Viharas and Chaitya halls from the living rock of the Western or the Eastern Ghats, or cells and caves like those of Ajanta, is the same which produced in a later age statues of the Thirthankaras at Sravana Belgola, Yenur, Karakala, as well as on the rocks of Gwalior. This tendency to reduce rocks to architectural constructions, as in the case of the Rathes of Mahabalipura, is, like sculpture, producing forms through subtraction, and not, like architecture, producing forms through addition. The Gopurams of the so-called Aryavarta style appear so kneaded as a whole out of clay, and the Sikharas and Vimanas of the Dravidian style appear lost in a forest of figures.

No country in the world has been so unfortunate as India in regard to her history and architecture, or suffered so much at the hands of foreigners. Foreign invasions and foreign vandalism perpetuated from the sixth century till recently, the climatic conditions of a scorching sun, heavy rainfall, and destructive thunderstorms, and the encroachments of a dense tropical vegetation, have all combined to destroy more than even the pathetic neglect of her own children.

Of those buildings that remain, or have been uncovered by excavation, none go back beyond the Mauryan period, excepting the walls and dwellings of old Rajagriha, "all built of rough cyclopean masonry."

Of the buildings of this pre-Mauryan period, though as yet few have survived or been excavated properly, enough can be gathered from literature to give us a fairly good notion of what they must have looked like, in spite of the descriptions being more poetical than architectural. So much is clear, that cement, bricks, and wood played a greater part in construction than stone, and the first fine stone building that was erected was probably the audience hall of the Pandava princes designed for them by the half-mythical Maya.

The early schools of architecture probably originated in India because of the Sattras, or sacrifices. The exigencies of erecting the Vedic altars of the various kinds and dimensions, of providing huge covered places where the spectators could be fed and discussions held, may have furnished the models for many an old royal palace, as that of King Sudas, Janaka Trasadasyu, Mandhata, and others. In these constructions wood must have played the chief part, and huge halls with rows of columns must evidently have been imitated from Devadaru forests which clothed the Himalaya, and the white colour which seems to have been the favourite for spires must have been suggested by the snow-capped peaks of the same.

* Summary of a Paper read before the East India Association on April 24, 1922, and published in the "Asiatic Review."

From this very early period books were written on architecture, which continued to develop as a *Silpa-Sastra*, a branch of the larger *Vastu-Vidya*, and formed the original from which the latter books on the same as the *Kamikagama*, *Yantrasara*, *Mayamata*, *Manasara*, the scattered fragments of the *Puranas* and of the *Niti* and *Artha Sastras* treating about architecture, were developed.

Buildings were erected with more than ten floors, and the various kinds of temples were classified as *Vimana*, *Meru*, *Kailasa*, *Mandara*, etc. *Mandapas* were erected with varying number of pillars in various shapes and styles, so as to resemble the lotus closed and open, the water-lily, the creeper gourd, palm-leaf, water-pot, and various other designs surrounded or set in the midst of gardens and parks with aviaries, fish and lotus tanks, fountains, artificial hillocks, summer and winter pavilions, and picture galleries (*chitra-salas*).

With the advent of the Mauryas to sovereignty, and especially with the accession of Asoka, we find a glorious period of architectural activity, when more use is made of stone as a building material than at any previous period. Even the fortifications of Pataliputra, as described by Megasthenes were of wood (i.e., during the days of his grandfather, the first founder of the dynasty). The buildings in stone of this period (besides the few brick ones) and other monuments in stone comprise "a series of isolated columns erected by the Emperor (Asoka) at various places in North India—the remains of a pillared hall at Patna, which probably formed part of a royal palace designed apparently on the model of the Achaemenidean palaces of Persepolis (according to Dr. Spooner and Sir John Marshall) a group of rock-cut shrines in the Barabar Hills in Behar; a small monolithic rail at Sarnath; a throne in the interior of the temple at Bodhi-Gaya; some portions of the stone umbrellas at Sanchi and Sarnath; three structures in the round—two in the Indian museum at Calcutta and the third at Mathura."

The technique of these monoliths and of the huge faces of rock polished to receive the inscriptions, the interior of the dedicatory caves polished almost like glass, the carting of the pillars to long distances and their erection surmounted by capitals and animal figures, betoken a very high degree of architectural and engineering skill. The architectural fecundity of that period is well represented by the tradition which attributes to him (Asoka) the erection of 84,000 stupas, all of which conform to a general rule of architectural construction, and are semi-spherical or dome-shaped mounds, surmounted by umbrellas, generally of stone, enclosed by railings or Pradakshina paths, and entered by gateways, one at each of the four directions. The circular dome or mound was probably covered with fine plaster or chunam, and decorated with frescoes depicting the life of the Master and the history of the local stupa; the stone umbrellas were full of the most beautiful chiselling, overhung with banners and garlands; and the toranas, or gateways, and the railings as well contained the best specimens of art of the sculptor depicting Buddhistic stories and the ordinary life of the people.

The origin of the stupa has been a matter of controversy, some deriving it from the earthen tumulus or burial mound, and others from a bamboo structure, or aboriginal hut, like that of the Todas. Certain it is that, as they are now found in a perfect form of development, the link missing and probably the stone structures were modelled after or replaced earlier prototypes in wood. In Vedic literature the word stupa means "the crown of the head," and in the South Indian architectural parlance the topmost part of the building, generally dome-shaped. Mention was made earlier in the paper of the pillars erected by Asoka, their exquisite finish and technique. Followers of Hinduistic faiths other than the Buddhistic did the same, and erected pillars, either dedicatory or votive, to

mark important events, or as dipadanās or lamp-posts, or as flag-staffs or dhvajastambhas. From this time the practice of erecting flagstaffs or dhvajastambhas became an integral part of Hindu temple architecture, though the material in which they were built differed. That of the Kailasa is in stone, while the later South Indian temples began to substitute wood for stone, and as a compensation to cover it with gilded copper plates, so as to look like gold.

Besides the stupas the early Buddhists excavated caves, chaityas, and viharas, hewn out of living rock.

The chaitya hall of Karli is the largest in size, and has exquisite pillar capitals. Here, at the end of the seventh century after Christ, one may say that for all practical purposes Buddhist architecture ends, and the Brahmanic and the Jain begin their heyday glory, which they have maintained until to-day.

The Kailasa Temple is a masterpiece of architectural skill, a hill being chiselled away to make a temple, and contains some very fine sculptures. Besides this Brahmanic creation the Buddhists and Jains executed beautiful shrines and halls out of living rock, the chief of which may be mentioned: the Indra-Sabha.

From the tenth century onwards building activity ceased definitely in Upper India, though it still continued unabated in Central and South and in Greater India.

The mediæval temples which have come down to us can be divided locally as Orissan, Hoysala, Dravidian and Jain, though the classification regarding Dravidian and Jain is far from being correct, as some at least of the temples in South India were originally Jain and became converted thereafter into Hindu uses. The Jain architecture of the northern branch, the Svetambaras, differs considerably from that of their southern brothers, the Digambaras, and in its latter phases has borrowed much from the building canons of the so-called Indo-Mughal and Rajput schools. Further, some of their structures have a very close resemblance to those of the Orissan or the so-called Aryavarta school, so that it is absolutely impossible to say which is which from architecture alone without the aid of iconography. The Hoysala is only another variety of the Dravidian, and the Dravidian has not only influenced temple building throughout Mysore and Dharwar, but has located some of its temples even at Brindavan. Its influence not only in sculpture, but also in architecture, can be traced even in Ceylon, Java, Bali, and Cambodia; for of all the Indian races the Tamils are the greatest colonizers, and they are found to-day not only in Africa, the islands of the Pacific and India Oceans, but also in Central America and the West Indies.

Of the temples of Orissa, the best representatives of the so-called Aryavarta or the Indo-Aryan style, those that stand to-day, in spite even of the kind attentions of the Public Works Department, the English Army officers, and tourists, were erected between the ninth and the fourteenth centuries.

The earlier of the Jain temples at Parswanath, Satrunjaya, Ranpur, and Mount Abu belong to this period. On the Mount Abu Temples a special monograph might be written. The Vimala Saha and the Tejpal temples are real gems of Upper Indian and Jain art, in spite of their stiff and conventional sculpture, unnecessarily stereotyped by strict religious canons. The interior of these temples is a perpetual feast and a delight to the eye in spite of their sometimes cloying richness, and reminds one rather of the highest accomplishments of a jeweller or of a filigree-maker than of a sculptor or architect. Not only is the inside of these Jain temples, their arches being some of the most graceful and exquisite in the world, such as to charm an onlooker, but their exterior appearance also leaves a delightful impression. Another beauty of Jain architecture is their artistic grouping of temples on holy hills and the perfect place they assume in the lap of Mother

Nature—a true monument and architectural symbolism of the silent, deep, meditative spirit of the Tirthankars—"Ahimsa." The temples of Ranpur also form a striking group, and the same may be said to a limited extent of other holy hills of the Jains. One wonders whether the Hindus borrowed this beautiful grouping of their temples with such exquisite effect amid the cocoa-nut palms and other trees, from the Jains or the Jains from them.

The Hindus of Mysore, not to be outdone by this neighbouring Jain activity, produced some of the gems which are even to-day the pride of Mysore—the temples of Halebid, Belur, Somnathpur, Sringeri, Nuggehalli, and Devanhalli—and adorned them with sculptures which excite the admiration of architects. These triple or double temples, and the sculptures that adorn their plinths, are masterpieces of human ingenuity and patience. Few there are who have not praised the friezes of Halebid and Belur—friezes larger and more ornate than anything else of their kind in the world.

Turning now to Greater India, Ceylon, Java, Bali, and Cambodia, we find that their greatest period of building activity, though begun a century or two earlier than the tenth, practically ends with the thirteenth or the fourteenth. The Indian colonists, first Brahmin and then Buddhist, carried with them the South Indian building traditions, and drawing nurture and inspiration from the source which had erected a Brihadiwara, "Minakshi" and Nataraja temple, did the same to enrich Polanurawa, Angkor Thom, Angkor Wat, Bayon, and the innumerable temples of Java, Buddhist and Hindu. In Java Buddhist architecture claims our attention equally with the Brahmanic, and the temples of Boro Budur, Parambanam, as well as the numerous fanes of the Durig Plateau were finished before the fourteenth century. Not only is this island rich in architecture, but some of its sculptures are exquisite. From here, as well as from Ceylon, building traditions were carried out to Burma and Pagan, and gave rise to some of the splendid pagodas there, as that of Shwe-dagon. In this, as in everything else, the Tamils played a considerable part. In the early centuries of the Christian era their ships reached "Chavakkam" (the name for Java in Tamil) and many another island in the Pacific, and Tamil literature is replete with allusions to distant sea voyages. The ships of Rajaraja the Great threatened Burma, Pegu, Ceylon, and most of the islands of the Indian Ocean, and planted pillars of victory in these foreign lands. Kashmir escaped the violence of the Islamic cyclone till the fifteenth century, and developed an architecture of its own and began to erect buildings in an indigenous style, which was a product of the Greco-Roman and Perso-Indian influence of the frontier. The best example of this style, to which the name of Indo-Doric has been given by some scholars, is the ruins of the temple of Martanda. Nepal, however, continued to escape the storm till the last, and consequently developed an architecture mostly of wood, the most important examples being scattered throughout the valley, as at Khat-mandu, Bhatgaon, Pasupati, etc. It has been remarked by many an observer that Nepal contains more shrines than houses, and that the valley is the only place in India, except Malabar and some portions of Travancore, where the Hindu culture is found without admiration of Islam, and hence no wonder that the building material of the extreme South as well as of the extreme North should be chiefly of wood and their architectural styles have so much in common. Every South Indian shrine grew up by degrees, and even to-day additions are being made, or old parts replaced or built over: so much so that it is not possible to give definite dates without running great risks. They all grew up from a central shrine, now generally the Garbha-griha of the chief idol, and received additions gradually. The major ones contain, besides the principal shrine

several other less important ones, each with a small Gopuram or Vimana of its own, and contain at least two Prakaras, or procession paths, lotus tanks, mandapas for the housing of temple paraphernalia, as well as for dancing or recitals, or special autumnal or spring festivals, a Mulasthan where the original deity stays, an outer shrine where the Utsava Vighraha, or the processional deity, stays, two or three more outer enclosures, and at the end the dhvajastambha, or flagstaff, and beyond it the entrance gateways surmounted by huge Gopurams. Beyond the Gopuram there are what are called Asthana Mandapas, and generally the smaller temples have their lotus tanks. Inside the outer wall several have Mandapas, covered and running through at least a part of the way where pilgrims may rest or be fed during the temple feasts. Such is, in short, the description of a Southern temple, of which there are three kinds—major, middle, and minor.

If the temples of Madura and Jambukeswaram contain the most graceful lotus tanks, the temple city of Srirangam has the biggest and the largest number of Prakaras. Rameswaram and Chidambaram have the most graceful and the largest halls. In particular that at Rameswaram is the largest in the world, and strikes one with awe at the amount of human labour and love expended upon it. The temples of Tinnevely, Tadpatri, Vellore, Tenkasi, and Burmadesam belong to the middle class, and most of these are complete without the tank, which is a feature only of the Tinnevely temple. This form of temple construction did not stop with South India alone, but was carried also to Northern India, where one finds the best effects produced by a combination of the North Indian and South Indian style. Besides these temples the Rajputs and the Marathas built many beautiful palaces, as well as some graceful bridges, embankments, and lakes. Especially the Rajputs had a most artistic eye, not only for architecture, but also for Nature, and erected their palaces either in the midst of an artificial lake or other sheet of water, or at least with a water front. In this respect Udaipur, the last stronghold of Hinduism—justly boasts of having the most beautiful buildings. The Jagan Mandir, in the midst of the lake, the palace of Udaipur the temple of Ekalingi, the Chattris, the Mahasatis, the tower of victory at Chitor, and other buildings, were due to this royal house. Besides Udaipur Jodhpur, Dig, Datia, Gwalior, and Mysore, have their palaces as well as their private buildings of extraordinary beauty, several of them erected quite recently. So we find that sculpture and architecture is still a living, though fast dying, art in India, and seems to survive in the South at least, in spite of the Public Works Department. The recent additions to the Rameswaram, Chidambaram, and Tiruchundoor temples, and the erection of new temples, as at Kaladi and Sringeri, show that the master architects of the South, like their brothers of the North, know their business and the requirements of their country and climate far better than the architect who refuses to understand the needs of a tropical climate, or of a conservative people, but goes on building triumphantly practically flat structures, or monstrosities. Instances can be picked out, province by province, though one is sufficient to throw light on the matter. Let us take the High Court of Judicature at Madras and the Presidency College. The former owed its inspiration chiefly to an Indian master-builder, and the latter, the Presidency College, to the aesthetics of the Public Works Department. What a contrast! The High Court is an ornament as viewed from the beach, and a thing of beauty, with its light rotating and flashing, and its domes scintillating against a glorious tropical sky, and the Presidency College—the less said about it the better.

THE SOCIETY OF ARCHITECTS' CALENDAR.

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| Sept. 1 | Local Hon. Secretaries' reports due. Entries close for October Membership Examination. Issue of Library books resumed. |
| " 4 | Victory Scholarship Drawings. Exhibition opens. |
| " 7 | Council Meeting 4 p.m., Ordinary Meeting 6 p.m. |
| " 11 | Council's "House List" issued. |
| " 14 | Examination Committee. |
| " 22 | Membership Examination opens. |
| " 30 | Last day for delivering Nominations for Council and Architectural Scholarship Drawings. |
| Oct. 1 | Local Hon. Secretaries' annual reports due. Last day for Council nominations. |
| " 2 | Council Ballot Papers issued. |
| " 5 | Practice Committee 3.30 p.m. |
| " 9 | Last date for delivering Ballot Papers for Council Election, and for depositing Final designs in Part II of the second half yearly Design Competition. |
| " 10 | Scrutineers' Meeting. |
| " 11 | R. A. Chapter, 5 p.m., Holborn Restaurant. |
| " 12 | Council 5 p.m.—Special General Meeting 8 p.m. Scrutineers' report on the election of Council for 1922-23. Presentation of Victory Scholarship and other Awards. |
| " 13 | Victory Scholarship Drawings. Exhibition closes. |
| " 31 | End of Session. |

INTERNATIONAL CONGRESSES.

The Tenth International Congress of Architects will be held under the auspices of the Société Centrale d'Architecture de Belgique, at Brussels, from September 4 to 11, 1922, and will be accompanied by an International and a National Retrospective Architectural Exhibition.

The Société Centrale de Belgique will be celebrating the fiftieth anniversary of its foundation at the time of the Congress, and the architects of Belgium extend a cordial invitation to their foreign colleagues to join them in the celebration.

The Congress will include delegates from many foreign countries and The Society of Architects will be officially represented by the Honorary Secretary, Mr. L. Sylvester Sullivan, F.S.Arc. The Belgian Committee is under the Chairmanship of M. J. J. Caluwaerts with M. R. Moenaert as secretary.

An International Housing Congress will be held in Rome from September 21 to September 26, 1922. The Congress will deal with matters of great international interest, for in every country the lack of houses is felt enormously, chiefly by the working classes.

It is the special desire of the Executive Committee to secure the largest number of adhesions from foreigners, as everything will be organised in such a manner as to convey to foreign members of the Congress the most pleasant impression of the hospitality and beauty of Italy.

Interest in the Congress will be enhanced by the addition of a well organised exhibition of drawings, models, sketches, &c., illustrating what has been done in Italy with regard to housing and town planning.

Further details of both Congresses may be obtained from the Secretary of The Society of Architects, 28, Bedford Square, London, W.C.1.

Notices and Announcements.

By-Law 51. A member (in any class) shall be deemed to have knowledge of any by-law, regulation, rule, announcement, or other notice issued by the Society or by the Council and published in the Journal, as if the same had been served separately and personally or by post upon such members, but in all matters affecting the alteration of the Society's Articles of Association notice shall be sent to all members as provided by Articles 68 and 69 of the Society's Articles of Association.

COUNCIL'S "HOUSE LIST," 1922-23.

The Council's nomination list will be issued to Fellows, Members and Licentiates of the Society on September 11th, 1922, after which date any five Fellows, Members, or Licentiates qualified to vote, may nominate in writing any other duly qualified person to fill any vacancy subject to their having previously obtained the consent in writing of such person to accept office if elected. The nomination paper accompanied by such consent must reach the Secretary not later than the first day of October, 1922, and no nomination will be valid if the nominee or any of the nominators are under any liability to the Society.

Licentiates may not nominate candidates other than Licentiate candidates for vacancies on the Licentiate representation on the Council.

ORDINARY MEETING.

An Ordinary Meeting of The Society of Architects will be held at 28, Bedford Square, on Thursday, September 7th, 1922, at 6 p.m., for the election of candidates for membership and any other routine business.

R. A. CHAPTER 3244.

The next Regular Convocation of The Society of Architects Royal Arch Chapter (Installation Meeting) will be held at the Holborn Restaurant on Wednesday, October 11th, 1922, at 5 p.m.

Particulars as to the admission of members and visitors may be obtained from the Secretary at 28, Bedford Square, London, W.C.1.

MEMBERSHIP EXAMINATION.

Entries for the forthcoming Membership Examination should be made by September 1st but will be received up to September 11th. Licentiates and Students of the Society are expected to take advantage of this opportunity of qualifying for full Membership. The examination fee is £2 2s. An entry form and syllabus may be obtained from the Secretary at 28, Bedford Square, London, W.C. 1.

CURRENT COMPETITIONS.

Particulars of the following Competitions have been filed with the Society :—

Southend (School).	Hampstead (Flats).
*Bury (Brewery).	Daily Mail (Bungalow).
Lytham (Public Hall).	Building News.

* Barred by the Society owing to unsatisfactory conditions.

THE
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OCTOBER, 1922.

New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.

The Architecture Club.

The object of this Club, which was inaugurated on July 20, 1922, is "to enlarge public appreciation of good architecture and the allied arts, and especially of the best work of to-day." Membership is restricted to (a) architects or (b) writers, or (c) persons interested in furthering good building; and is to be divided as near as may be equally among these three classes. The Club is to consist of not more than 150 members during the year 1922, but may be increased as from January, 1923, by not more than 12 members every month until a total of 300 shall be reached; thereafter new members may be added only as vacancies occur.

The affairs of the Club are to be conducted by an Executive Committee consisting of ten members, five of whom are to be practising architects. The members of the Committee for 1922 are:—Oswald Barron, F.S.A.; James Bone; A. Clutton-Brock; E. Vincent Harris, F.R.I.B.A.; Ralph Knott, F.R.I.B.A.; Oswald P. Milne, F.R.I.B.A.; Giles Gilbert Scott, R.A., F.R.I.B.A.; J. C. Squire; and Sir Lawrence Weaver, K.B.E., F.S.A. The hon. treasurer for the year is H. Austen Hall, F.R.I.B.A., and the joint hon. secretaries J. C. Squire and Miss Grace Chapman.

The Executive Committee may further the purpose of the Club:—

- (a) By arranging or aiding in the arrangement of exhibitions of architecture and the allied arts.
- (b) By holding four dinners a year, at which members will each be entitled to bring one guest, and each member shall pay his shot.
- (c) By arranging meetings and excursions for the inspection and discussion of modern works of architecture.
- (d) By promoting the description and criticism of architecture in the Press.

All communications on the subject of the Club should be sent to Mr. J. C. Squire, "London Mercury," Castle Court, Poppins Court, E.C.

Proceedings of the Society.

An Ordinary Meeting of The Society of Architects was held at 28, Bedford Square, London, W.C.1, on Thursday, September 7th, 1922, at 6 p.m.

The President, Mr. E. J. Sadgrove, having taken the chair the minutes of the previous meeting, as printed in the Journal, were taken as read, and were confirmed and signed.

The following announcements were made: for Fellowship one, for Membership, four.

ADMISSIONS:—

REINSTATED TO MEMBERSHIP.—GADD, GEORGE HENRY, Town Hall Chambers, Bromsgrove, Elected 1885, Resigned 1904; TANNER, DOUGLAS G., Great Western Buildings, Livery Street, Birmingham, Elected 1910, Lapsed 1920; THORP, OSBORNE MOORHOUSE, Lawson Avenue, Long Eaton, Elected 1911, Lapsed 1920.

ELECTED AS LICENTIATES.—FRENCH, JOHN WILLIAM, Boro' Engineer's Office, Stockton-on-Tees; PRIESTLEY, CLARENCE JOSEPH, 19, Church Street, Stockport; LEA, WILLIAM ALFRED, Broughton, Huntingdon.

ELECTED AS STUDENTS.—BUTTON, FREDERICK CHARLES, 5, St. Hilda Road, Folkestone; HETHERINGTON, DAVID, "Orchard House," Cuckermouth, Cumb.

RESIGNATIONS ACCEPTED:—

MEMBERS.—BECKETT, H. P., Bank Buildings, Ellesmere Port; BUTLER, R. M., F.R.I.B.A., 23, Kildare Street, Dublin; DAVIES, LT.-COL. A. H., D.S.O., 35, Stow Hill, Newport, Mon.; JACK, G. W., 36a, Muswell Hill, N.; REID, A. W. D., A.R.I.B.A., Brown Cottage, Ovalways, Gerrards Cross, Bucks; RUSSELL-WALKER, R., c/o Chief Engineer, R.E., Baghdad.

STUDENTS.—KIRBY, E., 18, Lisson House, Lisson Street, Marylebone; NEWTON, A. W. P., 50, South Cliff Road, Withersea, East Yorks.

TRANSFERRED TO RETIRED LIST.—GREATBATCH, G. W., M.S.A. 1894, "Pinecroft," Pinehurst Road, West Moors, Dorset.

DECEASED.—THOMAS, H. G. O., M.S.A., New Zealand, Elected 1904, Local Hon. Secretary, Died March 2nd, 1922.

ELECTIONS:—The following candidates whose nominations had previously been announced and published were submitted for election under Articles 12 and 17 of the Articles of Association and were declared to be duly elected:—

AS MEMBERS.—BIRD, ERNEST, 23, Portland Terrace, Southampton; SINGLETON, JAMES, 7, Dickson Road, Blackpool; SMITH, CYRIL HERBERT, Chippenham, Wilts.

The proceedings then terminated.

THE LOAN LIBRARY.

The annual revision of the Library Catalogue is now completed, and books are available for issue as usual.

NEW BOOKS.

Purchased: CINEMATOGRAPH THEATRES, A Series of Illustrations reprinted from *The Builder*. London: *The Builder* Office, 1922.

Presented: COURAGE IN COLOUR. By R. Goulburn Lovell, A.R.I.B.A., M.S.A. London: Chas. Griffin & Co., Ltd.*

A TREATISE ON CENTRAL HEATING. By F. Broadhurst Craig. London: Published by the author, 1922.*

THE BUILDERS', PLUMBERS' AND DECORATORS' POCKET BOOK. By A. S. Jennings, F.I.B.D. London: Thos. Tofts, 1921.†

BUILDING SUPERVISION. By George W. Grey. Second Edition. London: E. & F. N. Spon, Ltd., 1922.†

PROCEEDINGS OF THE CAMBRIDGE ANTIQUARIAN SOCIETY, No. LXXI., Vol. XXIII. Cambridge: Deighton, Bell & Co., Ltd.; London: G. Bell & Sons, Ltd., 1922.

OBSERVATIONS ON BRICK BOND. By G. Saunders. London: J. Taylor, at The Architectural Library, 1805.‡

* By the Author.

† By the Publisher.

‡ Presented by Professor Henry Adams.

Modern Dutch Architecture.*

By HOWARD ROBERTSON, S.A.D.G., M.S.A. ILLUSTRATED FROM PHOTOGRAPHS BY
F. R. YERBURY.

"All the Arts," says Mr. Trystan Edwards in his book, "The Things which are Seen," "have eccentric phases which represent a complete break with familiar traditions, and those phases are novel inasmuch as their like has never been seen before; the authors of such developments, however, have not achieved anything meritorious, for, in ignoring antiquity, they have repudiated the element of reason exemplified in antiquity, which same reason must find expression, albeit in a slightly different manner, in the future also. The punishment which befalls those who cut themselves off from the past is that they can never really be modern, they can never make fresh conquests for the human spirit."

It would be hard to find a more pertinent warning than this enunciated by Mr. Trystan Edwards for the use of many who are prepared impartially to examine the most recent developments in Dutch architecture. Some there are to whom the modern spirit in any guise is nothing but repellent; with others, however, the younger school in particular, there is danger that sheer brilliance of the results of individual genius may be dangerously captivating, and that Tradition, the pilot, may be dropped too early on the voyage into future experiments.

Towards the modern Dutch movement it is impossible to remain indifferent; such indifference would be a sure sign of a torpid mind or of visual incapacity. Architectural manifestations such as are taking place in Holland to-day are far too serious to be taken lightly. Nor may we plead insularity and detachment; for, whether for better or worse, they are bound ultimately to have their reaction in this country.

Abundant vitality and intense individualism are the foremost characteristics of the modern Dutch expression in design. The buildings illustrated in this number of the REVIEW are representative of large numbers of others which differ in composition and detail, but not in spirit. They are typical of the new Dutch school, wilfully breaking with Tradition, contemptuous of all attempts to carry on an architectural expression which in the eyes of these modern disciples has already worked itself out to a final and somewhat effete conclusion.

It is not our purpose to discuss the wisdom of this decision, but to give some idea of the origin of the new movement and examine its concrete results; but in all fairness to the work illustrated, it must be understood that no drawing, photograph, or description can convey any but an inadequate idea of its actual effect in execution.

In Holland there is at least one modern architect whose name and reputation are known to all. That man is Berlage, whose design for the Bourse in Amsterdam marks the break with traditional Dutch Renaissance architecture and the beginning of the Modern School.

The Bourse was originally awarded to Cordonnier in open competition; the scheme was shelved, however, and some ten years later Berlage evolved his design. It is said that his original plans showed the Romanesque influence of the school of the American, Richardson; but out of his first conceptions has evolved a building which is more than tentatively modern. Since then Berlage has developed. He has had disciples and imitators. At the present time his fol-

*The Society is indebted to the courtesy of the Author and the kindness of the Editor of the Architectural Review for permission to print this article and for the loan of the blocks.

lowers form what might be called the group of "Moderate Modernists." Inspired by Berlage, but much more extreme in their expression, are the younger men, such as de Klerk, Kramer, La Croix, Wijdeveld. De Klerk is certainly one of the newest and brightest stars in the modern constellation. His influence is so potent as to have brought into being already a host of imitators who may, perhaps, copy his mannerisms without comprehending his ideals. But as de Klerk's mannerisms are as changeable as his technique is resourceful, it is probable that his work will always remain distinct and recognisable.

The conditions prevailing in Holland as regards the status of architecture are significant and illuminating. It is the greater public interest in building which has made the new manifestations possible, and at the same time it is the sponsors of the new school who, by their vigour and personality, have helped largely to create this interest.

Public propaganda has been cleverly organised by architects, and the general high standard of education and culture amongst the middle and upper classes has provided a fertile ground for the reception of the good seed. Not only have interest and discussion been stimulated, but the leaders of the new school have been so adroit that in certain cities, such as Amsterdam, they hold complete artistic sway, and have managed to persuade to their ideas not only the general public, but also official bodies. In Amsterdam to-day there is a Commission, formed of prominent architects, which practically has the power to prohibit all buildings which do not conform to a certain artistic standard. This standard is that of the Modern School, and the net result is that all new buildings are in the modern spirit. In certain streets in Amsterdam copies of the old traditional Dutch work are to all intents and purposes absolutely forbidden.

The broad and adventurous spirit which is present in some of the Dutch official bodies is not the least extraordinary feature of this state of affairs. Such public servants as Mr. Airie Keppler, the Director of Housing in Amsterdam, show a boldness and decision which has few parallels in England; without the official backing provided by such men, it is safe to say that young architects like de Klerk might never have had the opportunity of expressing themselves.

The great housing schemes now being carried out in Amsterdam are of a nature to provide the very finest scope for architectural expression. The buildings are of the "flat" type, four or five stories in height, and planned in large blocks which give every chance for broad, continuous, and majestic effects; in addition, the appropriations for these dwellings seem to have allowed for a certain latitude in architectural treatment and choice of material, so that the Dutch architect has not found himself hampered at every step by the stultifying necessity for rigid economy.

Of this particular type of building de Klerk seems to be a leading exponent. The buildings illustrated have only been recently completed, for the ultra-modern movement is indeed a post-war product, the last five years having witnessed its most characteristic manifestations.

The planning of the workman's dwelling in Holland is not in accordance with English ideas, and de Klerk's work forms no exception; but in extenuation of criticism it must be said that the plans are practically official "types," and they probably fill the needs of Dutch tenants fairly well, though suffering, as in all post-war building, from an inevitable curtailment of floor area. The "Store" is an important feature of the plan to which we are unaccustomed. It provides in each dwelling not only actual storage space, but in many cases accommodation for working implements such as a carpenter's bench. In de Klerk's houses the stores are located in the top storey, or in the Mansard-type roof; this location



AMSTERDAM HOUSING BLOCK: STREET ELEVATIONS.

De Klerk, Architect.



AMSTERDAM HOUSING BLOCK: DETAIL OF TYPICAL ENTRANCE.

De Klerk, Architect.

accounts for the almost unfenestrated mass of brickwork which at first glance is so intriguing to the English beholder. The small freight doors surmounted by crane and pulley are a relic of the Dutch practice of delivering all furniture and goods by means of external hoists. Indeed, in Amsterdam the staircases, which often boast an 8 in. rise with 6 in. tread (or worse), are almost impracticable to the furniture remover. Actually the new buildings are nearly all provided with internal service-lift arrangements.

The two most striking and praiseworthy characteristics of de Klerk's buildings are their magnificent breadth of handling, and the extraordinarily fine brickwork, which is laid with perfect craftsmanship and handled with an ingenuity which, however, at times abuses the function of the material, employing it as mere surface texture and not as a unit of construction. The illustrations adequately show such typical treatments. Broad swept curves, tiny apsidal turrets, chevron arisres and string-courses, bricks in chequer, wave, herringbone, and vertical pattern, all are conceived and executed with a perfection which places the modern Dutch builder in the forefront of technicians and craftsmen. Many may quarrel with the fantasy so lavishly run riot; and certainly there are questionable features. The projecting balconies, oddly reminiscent of a man-of-war, with parapet and soffit of brick laid on end, are entirely unstructural; in future schemes, in fact, we understand that these brick soffits are "taboo." But the fact remains that the supreme gift of imagination is present throughout the work. Such designs must have been visualised in both form and colour; the latter is magnificent, the bricks and tiles having a depth and richness of colouration which is enhanced by the surface texture possible with narrow bricks. De Klerk certainly knows and feels his materials, and is no mere paper draughtsman.

The extended use of tile might well be imitated in this country. Skill and research in manufacture in Holland have led to the production of purpose-made tiles of all forms. The junctions of Mansards, the meeting of wall and coping, are formed with "swept" tiles which cover the particular angle required, and carry the colour texture up roof and will without the interruption of external flashing. Black wall and roof tiles are used with interesting effect in conjunction with a yellow brick toned somewhat akin to the London "stock." Bright-red tiles and purple bricks produce an effect to us quite readily visualised; but the scale of the Dutch brick is one of the great assisting factors, and with our bricks many of the Dutch effects would become heavy and laboured.

A few technical points may be of interest. The walls from the first storey up are often one brick in thickness, the inside face being sprayed with asphalt and then plastered; the hollow wall is in favour, but, as Amsterdam foundations are on piles, weight-saving is a prime consideration.

Hard blue bricks are used in bases and ground floors; the brick joints generally are about $\frac{1}{4}$ in. to $\frac{3}{8}$ in. wide, and are flush, as in the old Dutch mediæval work.

Wood joists are used for floors, and these are often of great length, spanning between cross walls which are sometimes of amazing thinness. The joinery is fairly good for this class of dwelling, and in nearly all cases the wooden windows are either flush with the external wall face, or actually projecting. Sheet-metal windows occur on sharply curved surfaces and in large areas—such as, for instance, the post-office window shown on page 46. The design of doors, glazing, and details generally, shows great care and is highly fanciful. The eccentricity and freedom of form is supported by great playfulness of colouration, which is nearly always successful.

Appreciations are bound to vary, but we cannot blind ourselves to the genius of this young architect, nor should we turn our backs on the lessons to be gleaned from his work. In addition, we are compelled to salute respectfully a Director of Housing who will risk criticism for the sake of his artistic convictions. One cannot help admiring the spirit which permits the designer to provide, in the courtyard of a block of tenements, a structure such as the little group crowned with de Klerk's fantastic tiled *flèche*. The practical utilisation of this delightful touch of imaginative creation is almost nil; the reason for its presence, merely to afford piquancy and delight to the eyes which peep from behind the courtyard casements!

It is astounding, when we know for how much Bernini stood, not merely in Italian art, but in the art of the world, that his work is so little recognised in England. In Bryan's "Dictionary of Painters and Sculptors," even in its rewritten and revised form as published in 1902, just nine lines are allocated to his outstanding personality! I can only hope that these few notes on his career will at least cause some to investigate for themselves his claims to be one of the world's greatest sculptors and architects. There are many to whom the Baroque makes but a feeble appeal, but even to these Bernini's name should be dear, for of all the exponents of that movement, none has been more imbued, not with an imitation, but with the very spirit, of that Green phase of art from which all art descends and which impregnates all that is best and most enduring in every succeeding school.

ARCHITECTURAL EDUCATION AND PRACTICE IN HOLLAND.

In connection with the foregoing article the following resumé of reports on architectural training and practice in Holland by Mr. Howard Robertson, M.S.A., Principal of the A.A. School, and by Mr. F. R. Yerbury, the Secretary of the A.A., which appeared in the "A.A. Journal" for August, will be found of great interest.

Architectural education in Holland, says Mr. Howard Robertson, appears to have arrived at a stage when a cleavage is noticeable between those who hold to tradition, and those who are feeling the influence of the ultra-modern movement in architecture.

The training available at present offers considerable variety in teaching influence, but it is less highly organised than in England, in that there are few schools of real standing, there is no official support, and in Holland a school diploma does not entitle its holder to Associateship of the B.N.A., but the Diploma is of assistance in gaining this distinction, which is conferred on the basis of moral and professional standing.

An intending student in Holland has the choice of attending a full-time day school, an art school, or of entering an architect's office and working in an evening school, such as the Rijks Academy in Amsterdam; in either case a very sound general school training is insisted upon, and this standard seems to be higher than that generally attained by an English public school boy.

The course of training which most nearly corresponds to the present English idea is probably that of the Technical Institute at Delft, which deals with engineering, science, architecture and decoration. It numbers about 2,000 students, of which 150 are on the architectural side.

The Delft school offers a five year course in architecture, under the direction of Von der Steur, a practising architect of repute, and the professors are all practising architects, assisted by younger men who may or may not have that qualification. The professors form a group corresponding to the Beaux-Arts Jury and Lecturers, and do not appear actually to assist in the studios.



AMSTERDAM HOUSING BLOCK: DETAIL OF CORNER ENTRANCE.

De Klerk, Architect.



AMSTERDAM HOUSING BLOCK: END ELEVATION FROM STREET.

De Klerk, Architect.

It is interesting to note that there are on an average 10-20 women students at Delft in the first year, but only two have so far gained the diploma, the remainder appearing to "drop out," on the way.

The school at Delft presents one system of architectural education in Holland. At the other extreme is the method in vogue in the towns where no day school is available, such as Amsterdam, and between the two lies such training as is available at Harleem, where students may spend two years in a trade school (building) and then study design in the academy, which appears to be run on the lines of an art school.

The academy in Amsterdam is organised by a society formed of architects interested in the furtherance of higher architectural education.

At Amsterdam only fairly advanced men are admitted who are either in practice or employed as assistants, and the work is done in the evenings, and brought to the academy for criticism and judgment. The academy school has in this respect points of resemblance with the London Ateliers.

The number of architects in Holland compared to the population is small, says Mr. F. R. Yerbury. There is no statutory registration, and consequently there is a number who designate themselves architects, and do very bad work, in some cases on a large scale. The architects proper, however, nearly all belong to the Bond of Netherland Architects ("The B.N.A.") membership of which is by election (not by examination) on evidence of meritorious work and character. The Bond appears to take no part in architectural training, or the welfare of those entering the architectural profession. It fixes the scale of charges for architects, deals with other matters affecting their interest, and issues a weekly journal.

In addition to the B.N.A. there is the "Architectura et Amicitia," a society of some 700 members, consisting of architects, painters, sculptors and others interested in art, and it is this society which it would seem has been the greatest factor in influencing the attitude of the public towards architecture. The Society is responsible for the comparatively new publication "Wendingen," which is issued monthly, and specialises in each issue in a particular art subject, which in a recent number was modern architecture. As evidence of the appeal of this journal, it may be noted that the early numbers are now sold at a very high premium. This society has for some years past conducted a very clever scheme of propaganda on behalf of architecture and the arts, and the result is now apparent in the great interest taken by the public. As an instance, every architect of any eminence in his profession is well-known to the public. The average educated man is well acquainted with the names of the architects of the various new buildings, and in discussing a new building, or a housing scheme, he will refer to the architect in the same way as he would refer to a musician, in discussing his work. It is fully appreciated that buildings are designed and are the work of creative artists. The influence of this propaganda is also apparent in the work of the Government and municipal authorities, where it is evidently considered that even the smaller things, such as the swings and exercise bars in the children's public playgrounds, are worthy of being designed by an architect.

There is an extremely "live" movement in the architectural profession towards "modernism," and although naturally the younger men are the most enthusiastic supporters, there seems to be no great division of opinion in the profession on the matter. There is certainly a section of "Classicists" who are opposed to the new school, but they are in a minority. The general opinion of the majority of architects is that the dominating influence or tradition in design

is harmful, and that all that was done in the past belonged to its particular age, and fine as it is, affords no reason for copyism, nor has any concern with the present.

The present age demands its own architecture, and therefore a definite break with tradition is a necessity. Thus have the architects decided, and public demand has supported them. Such is the public interest in and belief in architecture as a creative art, that it is prepared to accept entirely new ideas in design, and, indeed, expects them. It will not tolerate repetition of the antique as witness a recent incident when a building designed in the Dutch Renaissance manner was erected in Amsterdam, and caused a cry of protest in the public Press and from numerous correspondents. One thing which seems to have introduced a great amount of life and interest into the architectural world and its works is the numerous opportunities given to the younger men to carry out large and small commissions. Opportunities are given them in a way unknown in England, and, moreover, they are given a very free hand in developing their ideas. Opinion in England will no doubt differ considerably in the merit of the work at present being done in Holland, but the fact remains that those doing it are actuated by the most sincere motive. There is a general atmosphere of vitality and progress amongst the architects which is not found in England. This is undoubtedly very largely due to the encouragement and opportunities afforded by the public, which again is the very obvious result of propaganda by the architects themselves.

Mainly about Members.

Mr. F. G. COATES has resigned his appointment as Surveyor to the Frinton-on-Sea U.D. Council in order to undertake private practice in the same locality.

The Malvern U.D. Council have had before them the names of four architects, two recommended by the President of the R.I.B.A., and two by the President of the S.A. in connection with the proposed Public Baths, and have selected Mr. A. J. Taylor, F.S.Arc., V.P.S.A., of Bath.

Mr. CYRIL F. BATES, A.R.I.B.A. and COLIN L. JONES, M.S.A., are the authors of the design placed first out of 23 submitted, for the Newport (Mon.) War Memorial. These architects also designed the cover for the R.I.B.A. Cardiff Conference Smoking Concert programme.

The partnership hitherto existing between Messrs. L. C. CHARLES EDWARDS and ELLIS M. WHITE carrying on business as Architects and Surveyors under the title of L. C. Charles Edwards & Co. of Colwyn Bay, has been dissolved. Mr. White, who prior to the war practised at Carnarvon for many years, will continue to do so at Colwyn Bay.

Obituary.

With great regret we announce the death on September 24th of George Henry Paine, F.S.ARC., of 62, Moorgate, E.C., a Vice-President of The Society of Architects. The late Mr. Paine joined the Society in 1905 as a Member and became a Fellow in 1920. He took a very active interest in its affairs and had been on the Council for ten years, during which period he served the offices of Honorary Secretary and of Honorary Treasurer, and was just completing his first year as a Vice-President. By his death the Society loses the support of a member who up to the last rendered it very willing and valuable service, and one who will be greatly missed by his friends and colleagues.

* A Layman on Architecture and Architects.

Lord Riddell in opening the annual exhibition of the work of students of the University of Liverpool's School of Architecture, held in the Walker Art Gallery, Liverpool, on June 30th, said he was not an expert in architecture, but he took an interest in the subject from the point of view of the man in the street. It was important that the architectural experts should cultivate the intelligence of men like himself, for when all was said the effective exercise of the art of the architect must depend on the existence of a faculty of appreciation in the general body of citizens. Architects were a very modest tribe. They never advertised themselves, and did not even put their names on the buildings they designed. In some cases it might be suggested that they were afraid to do so. He would like to see the public taking the same interest in architects that it did in doctors and lawyers. "Doctors buried their failures in the cemetery, lawyers buried theirs in the bankruptcy courts, but the failures of the architect stood as a permanent menace to civilisation and it was therefore essential in the public interest that architecture should be good.

One reason why architecture had made such a great advance in America was that there the architect was not always so anxious to express himself as the English architect seemed to be. He was prepared to copy more and to make a greater use of ancient models. It was obvious that the number of forms which could be employed for architectural design was limited; and if those lines were twisted unduly into new shapes the result was likely to be that the buildings would be lacking in the symmetry, the dignity, and the charm which they should possess. It would be a great mistake to think that architecture was not progressing in England. Although not very much was said about it, architecture was making great advances. London, for example, was rapidly becoming not only one of the most interesting and one of the busiest cities in the world, but also one which possessed the finest examples of modern architecture. In the humbler as well as the more stately buildings the same advance was to be observed. No one who examined the houses which had been built in the last two or three years could fail to see the marked improvement which had taken place in their external design and their internal equipment. There was, however, one phase of architectural work which was inadequately appreciated by the architects themselves. It was one of the difficulties of the profession that the architect had to perform two functions—one was the function of the artist and the other the function of the business man. It was the latter branch whose importance was not sufficiently recognised by the architects. The ordinary man who called upon the architect's services wanted not only a nice building suitable for its purpose, but he wanted also to avoid the things called "extras," which were the bugbear of all building-owners. There was nothing more important than that the architect should develop the business spirit and accustom himself to the method of business organisation. The business man wanted to know what a building was really going to cost, and he did not wish, when the work was finished, to be presented with a bill which far exceeded the expected figure.

* From a report in the "Building News," of July 7, 1922.

A Plea for the Modern Outlook.

"Encouragement for proficiency rather than protection for practitioners would appeal more to an enlightened public. A federation of all the architectural societies is necessary to urge on Parliament the need for a large subsidy for architectural education." The above is from an article by H. Bartle Cox, in THE SOCIETY OF ARCHITECTS' JOURNAL for May. In New Zealand there is only one architectural body, the Institute. It is doing a great deal under very discouraging circumstances to advance the cause of architectural education. When the time is ripe it may launch a campaign for the necessary government assistance.—"N.Z.I.A. Journal," July, 1922.

Sandwiched in among the bulkier publications I find two numbers of THE JOURNAL OF THE SOCIETY OF ARCHITECTS. It is to the leading article in the May number that I direct your earnest attention. The article in question is by H. Bartle Cox, A.R.I.B.A., Membre corr. S.A.D.G., is entitled "A Plea for the Modern Outlook," and evidently was written in France. I wish I could quote it all, but it covers over twelve pages of the JOURNAL. The author is a devout believer in the efficacy of training, and advocates "centralisation," i.e., education by the government as in France. He believes in Federation rather than Unification; and, too, he believes in standardisation. "Is not man," he asks, "a social animal, and do not architects copy and develop along traditional lines?" "Originality in design," he continues, "is too great a miracle to be believed in by professional men with any learning." But, let me say, not so great a miracle or so stupendous a fact as to be unwelcome when it does appear as it has in ages past. "The present age," says our author, "is a transitional period of great complexity in which the engineer alone is sure of his standard, provided he does not attempt ornamentation, popularly termed architectural treatment. . . . The aesthetics of pure construction are more important than its dressing, but long before the whole can be brought to perfection the modern standard must be found." And then: "The petty-minded infatuation for ornament, the hysterical appreciation for local peculiarities (more novel to the visitor than to the resident), the pretentious ancestral worship of the half-learned archæologist, the sophism of most popular writers, the widespread insincerity of many so-called artists (poseurs), the bluff of modern art dealers (made easy by dilettantism), the belief that art is a gift outside and beyond all useful and practical considerations, are some of the reasons why the meaning of the word Architecture has been so distorted, why the average person takes the trappings of a building to indicate its style, and why he dare not admit the beauty of engineering, while, at the bottom of his heart, he enjoys his motor car far more than his Queen Anne billiard room, and admires the nation's marine more than its museums. It behoves architects to take this into consideration if they want to improve the narrowness of their modern position."

"Parliament," says our author, "if asked to grant registration might demur on the following questions:

1. What is an architect, what are his functions, and from what does he claim to be able to protect the public?
2. Do architects know more about building than engineers?
3. Is art, as understood by modern practising architects, an undisputed boon to society?"

And Mr. Cox sums up his thesis by urging on the profession the necessity for completing the organisation "by founding:

1. A single Centralised National School, with ramifications in the provinces;
2. A system of Co-operation with Industry, for the realisation of national

problems; and

3. A Federation of All Architectural Societies, to present petitions to Authorities."

All this by our author. And now let me dogmatise a little and in my own feeble way analyse the functions of both engineer and architect and determine, if may be, whether the one deserves all the encomiums which he himself among others is now showering upon him and whether the other is serving society as his art demands.

And, too, let us make it perfectly clear at the outset that the only branch of engineering which pretends to usurp architectural functions is the structural branch in which may be included the business engineer or contracting builder. The automobile engineer, the mechanical engineer, the naval engineer, affect architecture only as they educate (if they do) the public taste to an appreciation of functional line; and a shallow public is sometimes deceived into believing that because a functional line may be made beautiful by an artist that all functional lines must necessarily be beautiful; the latter is not true and never was. An object may function perfectly and yet not be aesthetically beautiful—if you don't believe it just contemplate some other man's perfectly good wife (or some other woman's model husband). The function of engineering is to make practicable and economical in action the machinery for sustaining life; the function of architecture is to help life to be worth living when once the sustenance has been provided. The craving for food and for shelter, the physical craving, has always been in man—it has led to wars, mass-movement and slavery. The craving of the spirit for beauty has been co-existent with this other and has made for peace, individual initiative and freedom. Force has gone with the one—gentleness with the other. You can pass fair judgment on the spirit of an age by determining which element has dominated the arts. I think I have answered the first question which might have led Parliament to demur. The answer to the second is implied: the real architect does know more about building to satisfy the craving of the spirit for the higher things in life than the engineer or any other building agency. The moment the engineer builds with that in view he ceases in the very nature of things to be an engineer, and becomes an architect. And if he has that possibility within him I do not want to see him robbed of his rightful heritage by any narrow class legislation. And as to the third question, from my limited capacity for judgment, I should have to answer in the negative. Mr. Cox has indicated one phase of a negative answer in the paragraph quoted above, beginning: "The petty-minded infatuation for ornament," &c., a perfectly valid statement which is expanded among other equally valid statements in his valuable paper. That the engineer and the architect each may know what underlies his own profession and that of the other I shall epitomise.

Engineering gives expression to the material side or basis of society. Architecture emphasises the spiritual aspect. When a structure compels the sense of something beyond mere utility, of some spiritual content, it transcends engineering and in just that measure it is architecture, regardless of the cast, class or profession of its creator. When a structure fails in this high mission, whether designed by a self-styled or by a legally established architect, it fails of architecture though by some happy accident it may fall into the category of good engineering. The engineer gives expression to the material aspects of society. He is like a reporter dealing in detached facts though sometimes binding them into a readable story. The architect, like the dramatist, deals with facts in their spiritual significance and weaves them into an expression of the spirit of the age. The architect causes facts to function ethically in a medium of aesthetics. If the architect does not accomplish this in so far as he fails, he fails of his mission; also he fails to perform a self-appointed task; and worse, where registration laws

are in force, he fails to fulfil an immense social obligation in the performance of which the law at his own behest creates a monopoly in his behalf.—Irving K. Pond in the *Journal of the American Institute of Architects*, August, 1922.

Unification.

THE JOURNAL OF THE SOCIETY OF ARCHITECTS, presenting the point of view of a large number of British Architects, has published a statement on Unification in the architectural profession as issued by the Committee on Unification and Registration. This statement seems to have the approval of Mr. Paul Waterhouse, President of the Royal Institute of British Architects, Mr. Edwin J. Sadgrove, President of the Society of Architects and Mr. Arthur Keen, Hon. Secretary, R.I.B.A., the above named serving in the order mentioned as Chairman, Vice-Chairman and Hon. Secretary of the Committee.

The question of registration being deeply involved with that of Unification, the British point of view must be of interest to every American architect. The British idea seems to be Unification first and registration as a consequence. The American idea, registration first and as much Unification afterward as may be deemed advisable for the welfare of the public and advancement of the profession. The Committee report says that "Unification means a grouping with an organic whole within the Royal Institute of British Architects"; the Society of Architects is to be eliminated as far as concerns its name if the reported is adopted; some other societies are allowed to retain their name and entity. The unattached architects, it is presumed will gladly accept an offer of membership in the R.I.B.A. The grade of membership for each society and the individuals is to be determined at a later date.

The advocates of Unification "regard Unification as a preliminary step without which registration is a mere vision, and as a stage in the evolution of registration which will add incalculable value and force to registration when finally the latter is obtained." The report then sets forth the advantages to be obtained by a large single association acting under the Code of the Royal Institute of British Architects, the advantages to the individual, to the profession and to the R.I.B.A.—the concentration of all authority in the Royal Institute of British Architects and the saving of all Charter rights of that organisation without disturbance from Parliament.

Summed up, the proposition seems to be compulsory membership in a great guild of architects with grades established by the guild itself and every member registered as an architect. A minority report by Mr. Alfred W. S. Cross, Vice-President, R.I.B.A.; Mr. Sydney Perks, Mr. W. E. Riley, Mr. Digby Solomon, takes issue against the scheme on the ground that it would lead to a weakening of the standing of the R.I.B.A. and then demands that the Institute proceed forthwith to promote a Bill for the Statutory Registration of Architects.

The discussion of the question of Unification of British Architects is not our concern beyond the light that it may furnish to the American architect. We consider that any test leading to the entrance to our profession in our country must necessarily demonstrate the applicant's ability to meet certain minimum educational qualifications; a good preliminary education, varying in definition in the many states, but actually amounting in values to the same proof of ability to understand the major subjects, i.e., History, Language, and Mathematics involved in the study of architecture. The applicant being thus prepared is subject to tests in the History of Architecture, Architectural Design, Plan, Architectural Engineering and Architectural Practice. Passing these minimum tests entitles the

applicant to serve as an architect. The idea of a maximum test is set aside as being impossible since no one is deemed competent to apply it.

The American Institute of Architects accepts to its membership those who have advanced to a satisfactory point beyond the minimum established by law. An Institute membership covering the entire profession might be an important political agency for the profession if harmony of action could be assured, but it would at best be one new "bloc" to inject discord in the body politic. We believe that it may be assumed that the power for good is greater in a body composed of persons representative in their professions of the highest degree of attainment than in a diluted organisation. Therefore we do not open the door of our national organisation to those unable to qualify beyond the minimum standards established by statute.

The ideal of a guild, however, persists and cannot be carelessly set aside, but the guild means allocation to class in a profession. Business disadvantage prohibits such classification in the mind of the American, but as a rule he seeks to qualify for membership in a society in which membership is presumptive evidence of competency to a degree beyond the provisions of the law. For geographical convenience the Institute has Chapters. Entrance to the Institute by way of the Chapter which represents the local opinion of the candidate's competency held by his competitors is an approach which generally speaking assures Institute standing. Statutory regulation of minimum qualifications is the life of our system. Progression to Institute membership by advancement because of conscientious work is the source of whatever power the Institute may possess. Failure to apply for Institute membership is not deemed to be a reflection on the ability of an architect.

Registration first and Institute recognition for advanced knowledge second is a workable programme. It does follow the path of the guild to a degree, being a compromise between the guild and the more or less concentrated control of an entire profession. No architect here wishes Unification at the cost of free will. No one seems to object seriously to reasonable proof of qualification, but to submit to organisation rule, as a matter of law, does not appeal to the American. He has his local societies and state organisations; he may choose to be a member of one or all organisations of architects; but to enter any one he must be lawfully in practice as an architect and have given proof of attainment in excess of that required by statute.

Most American architects believe that it is an honour, outside of the law, to be a member of the American Institute of Architects, the Royal Institute of British Architects or The Society of Architects. It is probably an opinion formed by observation of the works of the distinguished personnel of these great societies. Many of us would feel sorry to see these organisations pass from their present status and become merely a group under statute law. The whole question involves the rights of a minority; we have had this principle continually before us since the foundation of our government. To box up all architects in a single crate and compel them to agree to a majority rule when ethics are not involved is an abandonment of liberty. Whenever a majority rules without protection to the minority, government shows signs of failure. Whenever democracy is mentioned it is always accompanied with restrictive laws making the principle a farce.

It seems that the American ideal, as far as the architect is concerned, is good, inasmuch as it preserves the right of the minority to join or stay out of a regulatory body. As long as the members of this minority behave themselves in their independence no one can justly criticise. If they do not so behave it is a matter of the application of punishment provided for under the general criminal code.—*William P. Bannister in the Journal of the American Institute of Architects, August, 1922.*

The Society of Architects' Victory Scholarship, 1922.

The Society of Architects' Victory Scholarship (£100 and a gold medal) is offered annually for Competition in Architectural Composition and Design. The competition is open to any British subject, man or woman, under thirty-five years of age, without any fee, and is divided into two sections: Part I., an open eliminating competition, and Part II. the final competition restricted to ten competitors selected by the Jury of Assessors, composed of the Patron of each of the Royal Academy Ateliers, two representatives of The Society of Architects, and a representative of each of the Architectural Schools entering two or more candidates for the competition.

Part I. consists of an *esquisse* prepared *en loge* at various centres within twelve hours, and Part II. of a large *projet* for which an *esquisse* is prepared under similar conditions at the First Atelier of Architecture in London, the competitors afterwards being allowed a month in which to develop and complete their final designs, which must not depart from the general lines of the twelve-hour final *esquisse*. These final designs are developed at any place convenient to the competitors.

This year (1922) there were sixty-six entries, including a woman architect, for Part I. of the competition, which was held on June 10 in co-operation with the Architectural Schools in London (two centres), Glasgow, Leeds, Cambridge, Liverpool and Sheffield.

The subject in Part I. was a Ceremonial Staircase, and fifty-six of the candidates prepared *esquisses*. The Jury selected the following ten candidates to compete in Part II. in London on July 15:—

J. A. Jellicoe (London), J. C. Shepherd (London), N. C. Mackey (London), D. Brooke (Liverpool), G. F. Shanks (Glasgow), E. N. Channon (London), H. St. John Harrison (London), A. S. Knott (London), Keith D. P. Murray (London), P. Hardy (London).

The subject in Part II. was "A Stadium for Olympic Games." Each of the ten selected competitors prepared final *esquisses* and eight afterwards developed and completed their designs, which were adjudicated upon by the Jury in London on August 23, who made the following award, which has been confirmed by the Council of The Society of Architects.

No. 97. H. S. John Harrison (London), £60 and the gold medal.

No. 68. N. C. Mackey (London), £20.

No. 107. K. D. P. Murray (London), £20.

The report of the Jury states that while the general standard is much higher than in previous years there is no design of outstanding merit beyond those of other competitors. The Jury, therefore, decided to divide the prize again.

Mr. Robert Atkinson, F.R.I.B.A., on behalf of the Jury of Assessors, will give a public criticism of the designs on

The record number of entries received, and the assistance so freely given to the Society by the Architectural Schools in organising local centres, is evidence of the value set upon the competition from the educational standpoint, and of the soundness of the conditions and system under which it is conducted.

The competition drawings and *esquisses*, which are an object lesson not only in the skill of the competitors in architectural composition and design, but also in their ability to grasp and delineate in a few hours the essential features of a complicated and unusual programme, are on view at the Society's rooms, 28, Bedford Square, W.C.1, except on Thursdays and Saturdays, until October 13.

after which date they will be at the disposal of the Schools of Architecture in the provinces for exhibition purposes. The prizes will be presented to the successful competitors on October 12th, at 8 p.m., when Mr. Robert Atkinson, F.R.I.B.A., will give a criticism of the designs.

Mr. H. St. John Harrison was educated in Newcastle-upon-Tyne, and served articles with Messrs. Oliver Leeson & Sons, of that city. In 1914 he won the Glover Medal of the Northern A.A. for measured drawings. He served with the Yorkshire Regiment during the war, and afterwards studied at the A.A. Schools, and won the British Institution Scholarship, 1918, and the R.I.B.A. Pugin Studentship, 1920. Mr. H. S. John Harrison is an A.R.I.B.A., at present on the staff of the A.A. Schools.

Mr. Keith D. P. Murray was articled to Mr. Arthur Wilson, F.N.Z.I.A., of Auckland, New Zealand, and for the last two years has studied at the A.A. Schools, and is a member of the First Atelier of Architecture. He won the first premium offered by Mr. H. Greville Montgomery for designs for a layout and stalls for a Building Exhibition at Olympia in a competition organised by the Patrons' Committee of the R.A. Atelier Council.

Mr. N. C. Mackay received his early professional training in Australia and at the outbreak of war was taking the Architectural Course at Illinois University. On leaving the Army he spent two years at the A. A. Schools and is a member of the First Atelier of Architecture. Mr. Mackay is an assistant in the office of Sir Aston Webb, P.R.A., P.P.R.I.B.A.

Each of these competitors took part in the Victory Scholarship Competition in 1921, and one of them, Mr. Keith D. P. Murray, reached the final that year.

Their patience, perseverance and hard work has this year been crowned with a measure of success. which should encourage them in further efforts towards perfection.

FEES PAYABLE TO ARCHITECTS IN CONNECTION WITH STATE-AIDED HOUSING SCHEMES.

In view of the terms of Clause E (4) of General Housing Memorandum No. 61, issued by the Ministry of Health, the question of the setting up by the Royal Institute of British Architects of a Tribunal to deal with applications is under consideration. Members of the Society who wish to obtain the support of the Tribunal under this clause should submit brief particulars of their cases to the Secretary of the Society.

PAPERS FOR SESSION 1922-23.

The Council of the Society invites offers of papers on matters of general professional interest, and suggestions for subjects for discussion during the forthcoming session. This invitation is not confined to members of the Society, but is extended to any person who is qualified to add to the sum of knowledge which architects may be expected to desire to attain.

Correspondence.

TO THE EDITOR OF THE S.A. JOURNAL.

BYELAWS WITH RESPECT TO NEW STREETS AND BUILDINGS.

SIR—I am directed by the Minister of Health to forward for information of The Society of Architects the accompanying copy of a circular, on the subject of byelaws with respect to new streets and buildings, which he is issuing to-day to all local authorities in England and Wales outside the County of London. As the Society of Architects will be aware building in London is controlled almost entirely by other means than byelaws.

The circular has been placed on sale, but the Minister will be happy (so far as the stock held in this Office for departmental purposes allows) to supply extra copies if desired by The Society of Architects. He trusts that the Society by making the circular known amongst its members and to any allied organisations, may be in a position to encourage the repeal of obsolete building byelaws and their replacement (where legal enactment is necessary to deal with particular points) by requirements of a modern kind. There will, he apprehends, be no difference of opinion upon the importance of securing the greatest possible freedom in building and development compatible with sanitation and safety.

I am, Sir,

Your obedient Servant,

A. N. C. SHELLEY.

Ministry of Health, Whitehall, S.W. 1,
1st September, 1922.

The following is the circular issued by the Ministry of Health to the Councils of Boroughs (outside London) and Urban and Rural Districts on 1st September, 1922:—

SIR—1. I am directed by the Minister of Health to bring to the notice of your Council the urgent importance of revising any byelaws in force with respect to new streets and buildings if this has not recently been done.

There is still a large number of local authorities who for many years have not altered their byelaws, which in consequence are antiquated.

It cannot be too strongly emphasized that a local authority are not warranted in retaining byelaws which may hinder private enterprise and are not really required for safety or sanitation.

At present local authorities are able to give some measure of relief from inelastic byelaws by consenting to a building under section 25 of the Housing, Town Planning, &c. Act, 1919. It has to be remembered, however, that this provision is only temporary, and, in any event, is not a satisfactory method of affording permanent relief. Moreover, the section deals only with buildings for human habitation, not with commercial or industrial buildings.

2. The model byelaws as to new streets and buildings have been frequently revised, particularly in the light of the experience of local authorities; and the present models are markedly different from the earlier ones. While they secure all the safeguards which local authorities, in the interests of the community, can properly require under the authorising statutes, they afford a wide margin of elasticity; and the Minister would urge local authorities who have not already done so to revise their byelaws on the lines of the latest models.

The Departmental Committee on Building Byelaws recommended that all byelaws

with respect to new streets and buildings should be reviewed at least every ten years; the Minister is inclined to think that this task should be undertaken at even shorter intervals in order that the local authority may be quite sure that their byelaws provide adequately for modern requirements.

3. The Minister will be glad to know what measures are taken in this matter by your Council, if their byelaws have not been revised since the beginning of 1914; and his officers will be glad to render any assistance which they can in any revision which is undertaken.

I am Sir,
Your obedient Servant,
A. V. SYMONDS.

THE STUDY OF OLD CHURCHES.

Sir,—If you know of any Members or Students who are interested in the study of old churches in the London district, I should be glad if you would ask them to communicate with me, when I should be pleased to give them particulars as to the occasional visits and meetings which take place in London, under the auspices of the Archaeological Section of the London Natural History Society.—

H. SPENCER STOWELL, M.S.A., Hon. Recorder, Archaeological Section, L.N.H.S.,
70, Victoria Street, S.W.1. September 15th, 1922.

Thos. Parsons & Sons' Competition.

DECORATIVE DESIGN FOR VESTIBULE ON THE FIRST FLOOR OF 17/19/21, DERING STREET, W.1 (MESSRS. PARSONS' ADDITIONAL OFFICES). FIRST PRIZE, 25 GUINEAS. SECOND PRIZE, 15 GUINEAS. THIRD PRIZE, 10 GUINEAS. ASSESSORS: SIR AMBROSE POYNTER, BART, F.R.I.B.A., M.S.A., AND J. S. GIBSON, ESQ., F.R.I.B.A.

Further particulars and elevations of the walls and ceilings, with key plan of the proposed Vestibule, may be had from Messrs. Thos. Parsons & Sons, 315-317, Oxford Street, W.1.

The Competition will close on November 15, 1922, and Competitors' designs should be returned to Messrs. Thos. Parsons & Sons before that date; the adjudication will take place as soon after as possible.

The Prizewinning designs to become the property of Messrs. Thos. Parsons & Sons, but they do not bind themselves to carry out any of them, and they reserve the right to purchase any other of the designs submitted at 10 Guineas each.

The decision of the Assessors to be final.

The Journal.

The new volume commencing with the November issue will contain a number of new features, and will be presented in a greatly improved form, both as regards style and matter.

Notices and Announcements.

By-Law 51. A member (in any class) shall be deemed to have knowledge of any by-law, regulation, rule, announcement, or other notice issued by the Society or by the Council and published in the Journal, as if the same had been served separately and personally or by post upon such members, but in all matters affecting the alteration of the Society's Articles of Association notice shall be sent to all members as provided by Articles 68 and 69 of the Society's Articles of Association.

ROYAL ARCH CHAPTER 3244.

The next Regular Convocation of The Society of Architects Royal Arch Chapter (Installation Meeting) will be held at the Holborn Restaurant on Wednesday, October 11th, 1922, at 5 p.m.

Particulars as to the admission of members and visitors may be obtained from the Secretary at 28, Bedford Square, London, W.C.1.

MASONIC LODGE 3244.

The next Regular Meeting of The Society of Architects Lodge (Installation) will be held at the Holborn Restaurant on Wednesday, November 8th, 1922, at 5 p.m.

Particulars as to the admission of members and visitors may be obtained from the Secretary at 28, Bedford Square, London, W.C.1.

CURRENT COMPETITIONS.

Particulars of the following Competitions have been filed with the Society:—

Chelsea (Nurses' Home).	Daily Mail (Bungalow).
Hampstead (Flats).	Birkenhead (War Memorial).
T. Parsons & Sons (Colour Scheme).	

SPECIAL GENERAL AND OTHER MEETINGS, OCTOBER 12TH, 1922.

A Special General Meeting of The Society of Architects will be held at 28, Bedford Square, on Thursday, October 12th, 1922, at 6 p.m. Election of New Members. Result of Council Elections, 1922-3.

At 8 p.m. Mr. Robert Atkinson, F.R.I.B.A., Director of Education at the A. A. Schools, and a Member of the jury of the Society's Victory Scholarship Competition, will give a criticism of the designs now on exhibition. During the evening the awards will be presented to the successful Candidates.

OCTOBER CALENDAR.

- | | | |
|------|----|---|
| Oct. | 1 | Local Hon. Secretaries' annual reports due. Last day for Council nominations. |
| " | 2 | Council Ballot Papers issued. |
| " | 5 | Practice Committee 3.30 p.m. |
| " | 9 | Last date for delivering Ballot Papers for Council Election, and for depositing Final designs in Part II of the second half yearly Design Competition. |
| " | 10 | Scrutineers' Meeting. |
| " | 11 | R. A. Chapter, 5 p.m., Holborn Restaurant. Competition Assessors' Meeting. |
| " | 12 | Council 5 p.m.—Special General Meeting 6 p.m. Scrutineers' report on the election of Council for 1922-23. Presentation of Victory Scholarship and other Awards and Criticism of Designs, by Mr. Robert Atkinson, F.R.I.B.A., 8 p.m. |
| " | 13 | Victory Scholarship Drawings. Exhibition closes. |
| " | 31 | End of Session. |

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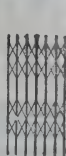
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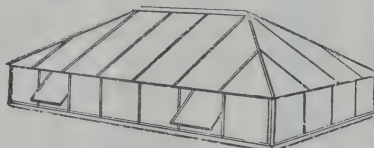
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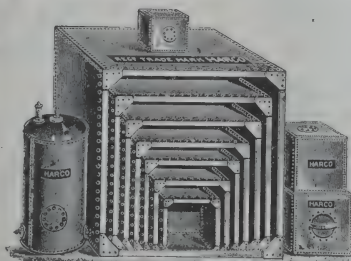
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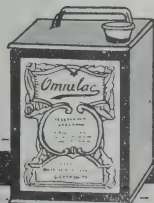
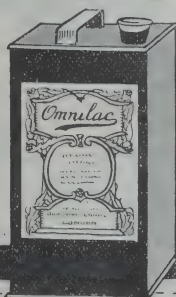
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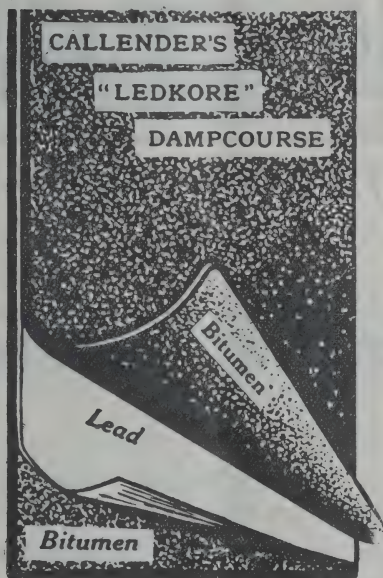
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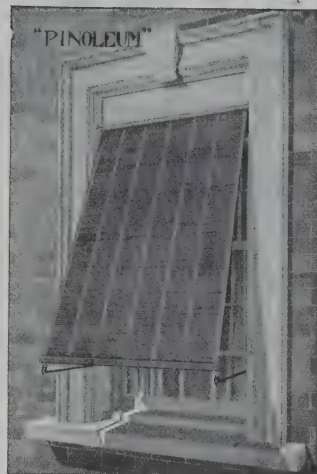
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